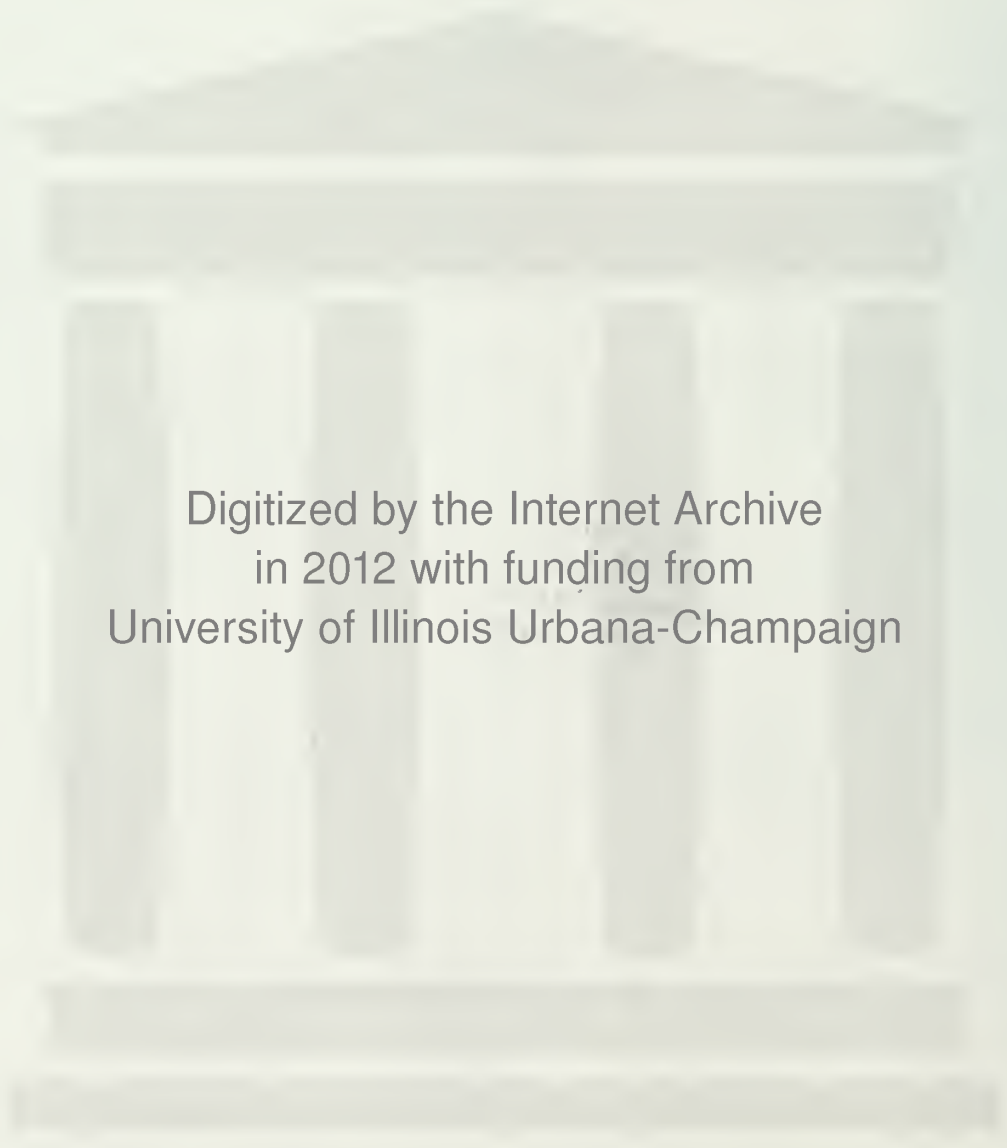

1988 64th annual
SUMMARY OF ILLINOIS FARM BUSINESS RECORDS

COMMERCIAL FARMS: Production / Costs / Income / Investments

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN / COLLEGE OF AGRICULTURE / COOPERATIVE EXTENSION SERVICE

CIRCULAR 1293

RETIREES

Robert "Bob" Baalman. Reared on a farm in Calhoun County, Baalman served in the Army from 1946 to 1948. Two years later, he enrolled at Western Illinois University, transferring to the University of Illinois at Urbana-Champaign in 1954. He graduated with honors with a B.S. in agriculture in 1955.

Baalman first taught vocational agriculture at Bethalto. He then worked for the Farmers Home Administration (FmHA) as an assistant county supervisor for Henry County for 5½ years, after which he was promoted as an FmHA county supervisor for Morgan County.

In July 1963, Baalman started working for the Western FBFM Association, serving Henry and Rock Island counties. He soon became a valuable resource to this pork-producing area and a stabilizing force among field staff in the entire association. He faithfully handled his duties as a fieldman in the same geographical area for the next 24 years, in spite of intermittent back problems.

Baalman has continued to help FBFM, working part-time during the winter record-processing season.

Warren Berner. This Clark County native enrolled in 1942 at the University of Illinois at Urbana-Champaign, but his college education was interrupted in 1943 by 2 years in the Air Force. Berner received his pilot's license during this period and often flew navigator in training exercises. He continued his college education in 1946, receiving a B.S. in vocational agriculture in 1949.

Berner taught at Cumberland High School until the spring of 1953. He then worked for the East Central FBFM Association. That marked the beginning of a 34-year career in the farm business analysis program. In his early years, Berner served as many as 235 cooperators in Macon, DeWitt, and the northern two-thirds of Piatt County. During the last 12 years of his career, he kept extensive data on the corn and soybean production practices of his cooperators. His efforts yielded some of the most complete data available anywhere on production inputs and machinery utilization.

Berner collects humorous cartoons and anecdotes as a hobby.

Boyd Henry. After serving in the Army, Henry enrolled at the University of Illinois at Urbana-Champaign, in 1947. Henry, of Vermilion County, graduated in 1951 and taught at Orangeville and at Ogden Community High School. In December 1956, he returned to the university as a detailed cost account fieldman. At the same time, he studied agricultural economics, graduating with a master's degree in 1959.

Henry was an executive fieldman with the Eastern FBFM Association for Edgar and parts of Champaign, Iroquois, and Vermilion Counties. During his tenure, the association grew from 330 cooperators to more than 550 and the number of field staff increased from two to five.

He was very conscious of the educational responsibilities of field staff who carried a Cooperative Extension Service appointment. He always emphasized the importance of their outlining alternatives so that farmers could make more informed decisions.

As a Civil War history buff, he is always ready to discuss battle strategies of that period. Another hobby of his is constructing ultralight aircraft.

Gerald "Jerry" Hulslander. This Henry County native served in the Navy during World War II. After the war, several years spent at the John Deere tractor works in Moline and Dubuque, Iowa, convinced Hulslander of the merit of entering college. He enrolled at the University of Illinois at Urbana-Champaign in 1949, graduating with a B.S. in agriculture in 1952.

Hulslander first served as an assistant farm adviser in LaSalle County with a special interest in soils. In 1954, he accepted a position with the Illinois Valley FBFM Association. This was the start of a 34-year career with FBFM. He became executive fieldman for Illinois Valley in the early 1960s. Hulslander was also active in statewide efforts for FBFM, serving as an assistant state leader for several years to support field staff training, and as chairman of the FBFM Electronic Data Processing Committee.

In addition to raising four children of their own, Hulslander and his wife, Jean, have shared their home with three teenage foster children.

SOURCE OF DATA

This report is based on data obtained from farm business records on 7,375 Illinois farms. It is the 64th annual summary of such records obtained from farmers cooperating with the University of Illinois Cooperative Extension Service, the Department of Agricultural Economics, and the Illinois Farm Business Farm Management (FBFM) Association.

At present, about one out of every five Illinois commercial farms with over 500 acres is enrolled in this service, which grew steadily until 1982. Enrollment declined slightly each year from 1982 through 1987. One factor contributing to this decline has been the lower levels of farm income during the last half decade, resulting in fewer farm operators. Enrollment increased slightly in 1988. In 1989, 10 associations in 102 counties are being served by 68 full-time field staff and one half-time field staff member. Participation in this farm-business analysis program is voluntary; cooperating farmers pay a fee for the educational services.

The program's development since 1940 is shown below.

Year	Associations	Counties participating	Field staff employed	Farmers enrolled
1940	3	23	3	680
1950	8	59	15	2,760
1960	10	100	33	5,494
1970	10	102	42	6,553
1980	10	102	67	8,205
1988	10	102	69	7,375

Estimates for 1988 indicate that 85 percent of the 7,375 farms covered in this report are larger than 240 acres. For the most part, this 85 percent falls within the size of business that includes farms selling $50,000 or more of farm products per year. In the 1987 Census of Agriculture, farms selling $50,000 or more accounted for 90 percent of all sales from Illinois farms.

The segment of Illinois agriculture that includes farms with more than 180 acres is often referred to as "commercial farming." In 1987, there were 44,810 farms in Illinois with more than 180 acres and with sales of $10,000 or more. The figures that follow, taken from the 1987 Census of Agriculture, show that these farms represented 76 percent of the 59,181 farms larger than 50 acres and that these farms produced more than 98 percent of the agricultural products sold from Illinois farms.

Acres per farm	Percent of all farms over 50 acres	Percent of census farms enrolled in FBFM	Number of farms enrolled in FBFM
180-499	43.1	9.3	2,380
500-999	24.1	17.8	2,538
1,000+	8.5	19.6	983

Although most of the 1988 recordkeeping farms covered in this report are within the two smaller size groups, the figures show that they are not distributed proportionately among the groups. There were 5,017 farms identified by the Census with more than 1,000 acres in 1987. About a fifth of these farms (19.6 percent) were enrolled in the Illinois FBFM Association. Of the 14,257 farms in the group having from 500 to 999 acres, 17.8 percent also participated in the farm record program. Only about 5 percent of the farms enrolled had fewer than 160 acres. The average size of all farms enrolled in 1988 was 667 acres, compared with an average of 345 acres for all Illinois farms.

The data presented in this report are group averages identified by size of business, type of farm, and quality of soil found on the farm. Where segments of Illinois agriculture are identified by these criteria, the data from recordkeeping farms may be used with reasonable confidence, even though the recordkeeping farms as a group do not represent a cross section of all commercial farms in the state.

USES FOR THIS REPORT

The management of a modern commercial farm involves decision making in the application of technology, the choice of a proper combination of crop and livestock enterprises, and effective business administration of the farming operations. A basic analysis of a farm business involves a careful study of past performance to detect problems and strengths in the farming operation. Also involved is the process of planning and developing future operations to realize the full potential of the land, labor, and capital resources available and to improve the economic efficiency of the farm business.

The farm-business summaries contained in this report are used by individual farmers to analyze their business operations and to develop plans for future farming operations. This report summarizes the information so that specialists involved in agricultural extension, research, teaching, and agribusiness activities may use the data to help them perform their duties effectively. The definition of terms and accounting measures on the following pages will be of assistance in using the data.

The first part of the report (Tables 2 to 8) summarizes recent changes in farm income on Illinois farms. It also identifies economic forces and factors that contribute to these changing trends. Some data used in the text are drawn from previous issues of this report.

The second section (Tables 9 to 18) presents data on livestock enterprises. The comprehensive and detailed information contained in this section is a valuable resource for anyone interested in livestock

production. Because part of the feed grains and roughages produced on Illinois farms is marketed through livestock, the margins of income from livestock enterprises are important in interpreting the economic results of some farming operations.

The third section (Tables 19 to 27a) discusses costs, returns, financial summaries, investments, land use, and crop yields for different sizes and types of farms in northern, central, and southern Illinois. It reports on the 25 percent of grain farms that received the highest return to management per dollar of cost and the 25 percent that received the lowest return. It also reports on two-man and three-man hog and beef farms. A two-man hog and beef farm uses from 21 to 27 months of labor; a three-man hog and beef farm, from 31 to 39 months.

DEFINITION OF TERMS AND ACCOUNTING METHODS

Soil-productivity rating

This rating is an average index representing the inherent productivity of all tillable land on the farm. Individual soil types on each farm are assigned an index ranging downward from 100. All ratings were revised in 1971 to reflect a basic level of management as outlined in Circular 1156 of the Illinois Cooperative Extension Service, *Soil Productivity in Illinois.* New land values were assigned in 1980. The annual change in land values represents an accounting adjustment to bring land values to current market levels.

Hay equivalents, tons

To get the equivalents, we took the total of 1.0 multiplied by the pounds of hay, 0.45 multiplied by the pounds of hay silage, 0.33 multiplied by the pounds of corn silage, and 24 multiplied by the pasture days per feed unit (which are also multiplied by the total feed units per cow). This total is then divided by 2,000.

Sampling technique

Data from all records certified for analysis by field staff were aggregated by size (acres or number of cows), type of organization, value of the feed fed, and soil-productivity rating. Electronic data-processing was used to summarize the data.

Type of farm

Grain farms are farms where the value of the feed fed was *less* than 40 percent of the crop returns and where the value of feed fed to dairy or poultry was not more than a sixth of the crop returns. Since 1973, farms with livestock have been essentially excluded from the sample of grain farms in northern and central Illinois in Table 19; since 1978, from the grain-farm sample in Table 20; and since 1982, from the grain-farm sample in Table 5.

Hog or beef farms are farms where the value of feed fed was *more* than 40 percent of the crop returns and where either the hog or beef-cattle enterprise received more than half of the value of feed fed.

Dairy farms are farms where the value of feed fed was *more* than 40 percent of the crop returns and where the dairy enterprise received *more* than one-third of the value of feed fed.

Cost items

The *value of feed fed* includes on-the-farm grains with the following average prices per bushel: corn, $2.32; oats, $2.25; and wheat, $3.41. Commercial feeds were priced at actual cost, hay and silage at farm values, and pasture at 40 cents per animal unit per pasture day. A pasture day represents an intake of about 20 to 25 pounds of dry matter, defined as 16 pounds of total digestible nutrients (TDN) from the pasture used.

Cash operating expenses include the annual cash outlays for these nondepreciable items: fertilizer, pesticides; seeds (including homegrown seeds); machinery repairs; machine hire; fuel and oil; the farm share of electricity, telephone, and auto expenses; building repairs, drying and storage; hired labor; livestock expenses; taxes; insurance; and miscellaneous expenses. Purchased feed, grain, and livestock are not included because they have been deducted from gross receipts in computing the value of farm production. The interest paid is not included because an interest charge is made on the total farm investment. But the total interest paid by the operator only on all debt—operating debt plus longer-term debt—is listed separately in Tables 19a to 27a under "Selected Cost and Return Items per Tillable Acre."

Machinery and equipment include depreciation, repairs, machine hire, fuel and oil, and the farm share of electricity, telephone, and auto expenses.

Labor includes hired labor plus family and operator's labor, charged in 1988 at $1,250 a month.

Interest on nonland capital covers the interest charged at 10 percent on the sum of one-half the average of the January 1 and December 31 inventory values of grain, plus the average of the January 1 and December 31 inventories of remaining capital investment in livestock, machinery and auto, buildings, and soil fertility, plus *one-half* the cash-operating expense, exclusive of interest paid. In Tables 5, 7, and 8, this charge is combined with the land charge or net rent and labeled interest charge on capital. The average cash interest paid per farm by all farm operators was $13,611. Details on operator and landlord shares of expenses and income are published

annually in research reports by the Department of Agricultural Economics.

Land charge or *net rent* is the bare land priced at current land values multiplied by 5.0 percent to reflect net rents received by the landlord.

Total nonfeed costs include cash-operating expenses, adjustments for accrued expenses and farm-produced inputs, depreciation, and charges for unpaid labor and interest including land charge. Purchased feeds and livestock are omitted.

The *basic value of land* (the *current basis*) is adjusted each year according to the February index of land prices in Illinois as reported by the United States Department of Agriculture (USDA). An additional adjustment was made to this index in 1984 to reflect the large drop in land values. The land value index for 1988, using a base earning value of 1979 = 100, was 58.

The *capital account adjustment* includes the gain or loss on capital items sold, plus the adjustments to capital items for basis lost or basis recovered when the 10 percent investment tax credit is selected for income tax reporting.

Return items

Crop returns are the sum of grain, seed and feed sales, the value of homegrown seed used, the value of all feed fed (except milk), government-deficiency and diverted-acre payments received and accrued, and the change in value for feed and grain inventories, less the value of feed and grain purchased. Government PIK (payment in kind) certificates purchased to redeem grain under government loan are included in the feed-and-grain purchase account.

The *total value of farm production* is the cash and accrued value of sales of products and services, less the cost of purchased feed, grain, and livestock, plus the change in inventory values for grain and livestock, plus the value of farm products used.

Net farm income is the value of farm production, less total operating expenses and depreciation, plus gain or loss on machinery or buildings sold, with a cost-basis adjustment when the 10 percent investment credit for income tax reporting is selected. Net farm income includes the return to the farm and family for unpaid labor, the interest on all invested capital, and the returns to management.

Labor and management income per operator is total net farm income, less the value of family labor and the interest—including net rent—charged on all capital invested. This figure, as the residual return to all unpaid operator's labor and management efforts, is then divided by the months of unpaid operator labor and multiplied by 12 to reflect income for one operator on multiple-operator farms.

Capital and management earnings are net farm income, less a charge for all unpaid labor.

Management return is the residual surplus after a charge for unpaid labor and the interest or land charge on capital are deducted from net farm income.

The *rate earned on investment* is capital and management earnings—interest on all capital and land charge, plus management returns—per $100 of the total farm average annual investment.

RECENT CHANGES IN INCOME ON ILLINOIS FARMS

Farm business trends in 1988

Illinois agriculture is based largely on crop production, especially corn and soybeans. In 1987, Illinois ranked second in the nation in the production of soybeans and corn. The total value of corn and soybeans produced on Illinois farms was 17 percent of the total U.S. production for these crops. In 1987, the total value was 58 percent of the total cash receipts in Illinois from all crops and livestock and 92 percent of the cash receipts from all crops sold.

Crops. Year-to-year variations in net income are related to crop yields, grain prices, and acres in high cash-value crops. Crop yields in 1988 were severely reduced in many areas of the state due to drought conditions that occurred during the growing season. In 1988, the average corn yield for Illinois was 73 bushels per acre, 59 bushels below 1987 and 62 bushels below the record yields set in 1985 and 1986. Recordkeeping farms averaged 77 bushels per acre in 1988, compared with 137 bushels in 1987. Soybean yields were 27 bushels per acre in 1988, compared with 38 in 1987. Crop yields on the 7,375 recordkeeping farms covered in this report averaged 5 percent above the average for all Illinois farms reported by the Illinois Crop Reporting Service.

The prices received for all soybeans sold during the year averaged $1.55 to $1.74 per bushel above 1987 prices, depending on where they were sold in the state (Table 1). Corn prices received in 1988 averaged 44 to 47 more cents than those received in 1987. Wheat sold for 89 to 94 cents more per bushel during the year. Crops under loan with the Commodity Credit Corporation (CCC) and forfeited at the end of the loan period are included as grain sales. The selling price would be the loan rate for that particular crop. Positive marketing margins on old-crop corn inventoried at the beginning of the year averaged about 31 cents and on old-crop soybeans, 86 cents. The year-end, new-crop corn inventory price was 58 cents higher than it was the year before, and the year-end, new-crop soybean inventory price was $1.65 above the previous inventory price.

Production of most crops in 1988 was below 1987 levels mainly due to the drought. Compared to 1987, corn production in 1988 was down 42 percent; soybean production was down 29 percent; oat production, down 30 percent; sorghum production,

Table 1. Average Prices Received and Paid by Farm Recordkeepers

	1988		1987	
	Northern Illinois	Southern Illinois	Northern Illinois	Southern Illinois
Grain prices per bushel				
Purchased — corn	$2.37	$2.40	$1.64	$1.64
Sold — corn	2.11	2.15	1.67	1.68
soybeans	6.49	6.73	4.94	4.99
wheat	3.43	3.38	2.49	2.49
Livestock prices per cwt				
Hogs, all weights	$42.33		$50.28	
Fed cattle, all weights	68.94		63.81	
Feeder cattle, all weights, prices paid	79.81		71.08	
Dairy cattle, all weights	55.68		54.18	
Sheep and wool, all weights	71.70		67.22	
Milk per cwt	11.76		12.01	

down 50 percent. Wheat production increased 20 percent and hay production increased 4 percent as the result of a 50 percent increase in hay acreage; farmers were allowed to cut hay from government program acres because of the drought. The Illinois 1988 All Crop Production Index, using a base value of 1977 = 100, was 66.1. This figure was down 33 percent from the figure for the previous year, and down 45 percent from the record high production index set in 1985. Drought conditions over many acres of the state during the summer of 1988 reduced yields substantially. Acreages of corn harvested for grain increased 5 percent from 1987 to 1988, while soybean acreage basically remained the same. Wheat acreage harvested for grain increased 18 percent, while the increase in harvested corn acreage reflected fewer acres set aside for the government's farm program.

As in 1987, conditions for planting the 1988 corn crop were generally excellent. This was the fourth year in a row that weather conditions were ideal for planting. Farmers planted 7 percent more acres of corn in 1988 than in 1987 as fewer acres were set aside in the government's farm program. Corn planting began in early April and progressed rapidly. Limited rainfall resulted in most of the corn acreage being planted in record time. Generally, planting was about three weeks ahead of the five-year average. Crop development slowed somewhat in June because of below-normal rainfall and above-average temperatures. Dry weather and extreme heat in July and August caused crop conditions to deteriorate significantly. Harvesting progressed rapidly during September and October because of favorable weather conditions and reduced yields. It was completed well ahead of the five-year average.

As with corn, soybean planting progressed rapidly, beginning in late April and finishing in record time, two weeks ahead of the five-year average. Dry weather conditions and extreme heat during the summer months affected the soybean crop as well. In addition to fewer pods and smaller bean size, there were more insect problems, further reducing bean yields. Many acres of beans in the north and central parts of the state were sprayed for spider mites. Favorable weather conditions in September and October resulted in harvest being completed well ahead of the five-year average.

Livestock. A second major determinant in farm income is the price farmers receive for livestock and livestock products. In 1988, the average prices received by farm recordkeepers in the Illinois FBFM Association were 16 percent lower for hogs, 8 percent higher for fat cattle, and 2 percent lower for milk than they were in 1987 (Table 1). The prices paid for all weights of feeder cattle and feeder pigs averaged 12 percent above the 1987 price for feeder cattle and 18 percent below the 1987 price for feeder pigs. Higher feed costs and higher feeder-cattle prices caused returns above feed and purchased animals for the feeder-cattle enterprise to decrease from $30.47 per hundredweight produced to $20.56 per hundredweight produced (see Table 10). Lower hog prices and higher feed costs caused hog returns to drop to 29 percent below the 5-year average from 1984 through 1988. Lower milk prices and higher feed costs made dairy returns above feed cost per cow lower than these returns were in 1987, but still above the average for the 5-year period from 1984 through 1988.

Labor and management income

The average operator's share of labor and management income for the 5-year period from 1984 through 1988 on all northern Illinois recordkeeping farms (located north of a line from Kankakee to Moline) was $5,977. Operators on 1,658 grain and hog farms in central Illinois had 5-year average earnings of $12,099 (Table 2). Central Illinois occupies the area between the Kankakee-Moline line in the north and the Mattoon-Alton line in the south. Smaller farms, more livestock (which until 1986 and 1987 have had low returns), and variable soil quality in northern Illinois have generated smaller earnings from crops and livestock. The farms in northern Illinois typically average 5 to 10 percent lower crop yields than those in central Illinois.

Northern Illinois has a heavier concentration of livestock, which had lower earnings in 1988, compared with 1987. The difference in earnings between central and northern Illinois increased by $321 in a comparison of the 5-year averages for the periods from 1983 through 1987 and from 1984 through 1988. This year is the only year out of the last three

Table 2. Operator's Five-Year Average Share of Labor and Management Income by Size and Type of Farm, 1984 Through 1988

	Number of acres per farm			
	Under 340	340 to 649	650+	All
Northern Illinois				
Acres of tillable land	226	441	875	510
Labor and management earnings by type of farm				
Grain	$ −737	$ 6,243	$ 12,332	$ 7,411
Hog	9,478	8,085	8,115	8,567
Beef[a]	−8,870	−1,619	−4,645	−4,138
Dairy	5,945	5,697	...[d]	5,837
All	2,888	5,561	9,439	5,977
Central Illinois				
Acres of tillable land	245	464	888	611
Labor and management earnings by type of farm				
Grain[b]	$ 3,921	$11,674	$22,400	$15,134
Grain[c]	503	5,994	12,268	8,523
Hog	6,746	8,439	17,688	10,336
All	3,632	9,346	17,750	12,099
Southern Illinois				
Acres of tillable land	228	531	1,038	691
Labor and management earnings by type of farm				
Grain	$ 322	$ 3,567	$10,279	$ 7,304
Hog	5,542	8,813	...[d]	7,971
Dairy	9,900	11,636	...[d]	10,866
All	5,202	6,227	10,279	7,725

[a] Includes central Illinois.
[b] Highly productive soils with soil-productivity ratings from 86 to 100.
[c] Heavy-till and transition soils with soil-productivity ratings from 56 to 85.
[d] Data not available.

in which the difference in earnings between these areas has increased. The recordkeeping farms in northern Illinois averaged 510 tillable acres per farm, compared with an average of 611 tillable acres on farms in central Illinois.

The figure for labor and management income varies considerably, depending on the location and type of farm. For the period from 1984 through 1988, operators in southern Illinois averaged $7,725 for labor and management. This average increased by $8,660, compared with the average for the five-year period from 1983 through 1987. When the average earnings for the 5-year period from 1984 through 1988 are compared with the earnings from 1983 through 1987, earnings increased in all three areas of the state.

In 1988, the labor and management income for all areas of Illinois averaged $9,500 per farm. This figure is $14,173 lower than the 1987 state average. Changes in the 1988 return among various locations were generally linked to rainfall amounts. Incomes in southern Illinois were relatively good as the drought was not quite as severe in that area of the state. Incomes in the northern two-thirds of the state were considerably less than the southern one-third. Incomes were lower for all types of farms when compared with those of the previous year.

The income or salary of the farm operator—whether tenant or part-owner—is the return for the labor and management provided by the operator. The level of income received is a measure of overall farming efficiency and includes compensation for the risk involved. The income includes the operator's gross sales and the net change in inventory. This income is reduced by operating expenses, depreciation, a charge for unpaid family labor, 10 percent interest on nonland investment, and a land-use charge equivalent to the average net rent received by landowners for crop-share leases from 1984 to 1987.

Whenever the income figures in Table 2 fall below the amounts required for living expenses and income and Social Security taxes, operators must use the charges deducted for interest on equity capital to pay these expenses. If we assume that $25,000 is needed to pay living expenses and income and Social Security taxes, these figures for 5-year average, labor and management income indicate that to pay these expenses, the average farm operator's family uses between $10,000 and $30,000 of the return for equity capital, depending on the location and type of farm. This decline in equity is synonymous with the drop in cost-basis, net worth (not including the drop in land value). Off-farm income could be used to offset some of this drop in net worth.

Family living expenditures

Total cash living expenditures for a sample of 365 central Illinois, sole-proprietor, farm-operator families in 1988 averaged $26,439 (Table 3). This figure is 4 percent higher than the 1987 average. Capital purchases for family living expenses of $3,403 include the family's share of the auto, plus items that exceed $250 and will last more than one year. Capital purchases for family living were 11 percent of the total cash outlay for all family living expenditures in 1988.

The average farmer in this sample paid $12,907 in interest in 1988 on operating, machinery, and long-term real estate debts. This interest expense was 11 percent of total operating expenses (including interest paid) and 8 percent of total farm receipts, or $20 per tillable acre farmed in 1988. The average amount of interest paid in 1988 was $2,059 less than the amount paid in 1987. Lower interest rates, a reduction in the amount of money borrowed for operating loans, and extensive use of CCC loans account for the lower amount of interest paid.

The most significant financial facts about 1988 are as follows:

- Net farm income, plus net nonfarm income, was $10,676 less than the sum of family living capital purchases, total living expenses, and payments for income and Social Security taxes;
- Liabilities of $175,131 as of December 31, 1988, were 58 cents for each dollar of farm-only assets,

Table 3. Operator Farm and Family Sources and Uses of Dollars on an Average per Family in Central Illinois, from 1985 Through 1988

	All records, average per farm				Family of 3 to 5, 1988	
	1988	1987	1986	1985	High-third[a]	Low-third
Number of farms	365	328	324	313	80	80
Tillable acres farmed	661	665	651	629	793	512
Acres owned	116	119	124	119	118	87
Farm assets, January 1[b]	$321,422	$327,059	$361,276	$378,911	$345,973	$229,083
Farm assets, December 31[b]	303,897	326,706	356,244	383,228	328,929	219,680
Liabilities, January 1	187,670	203,647	223,214	220,968	222,594	129,402
Liabilities, December 31	175,131	199,282	212,064	234,155	214,969	116,466
Net farm income	**17,438**	**36,388**	**25,555**	**25,677**	**20,698**	**15,022**
Source of dollars						
Net nonfarm income	$ 9,654	$ 8,682	$ 8,526	$ 8,721	$ 9,165	$ 10,839
Money borrowed	91,872	129,694	123,445	137,065	121,009	59,163
Farm receipts	163,138	176,181	167,938	157,042	192,464	127,168
Total sources	**$264,664**	**$314,557**	**$299,909**	**$302,828**	**$322,638**	**$197,170**
Use of dollars						
Interest paid	$ 12,907	$ 14,966	$ 20,421	$ 22,144	$ 16,352	$ 10,015
Cash operating expenses	101,802	111,011	100,983	96,761	123,236	79,592
Capital farm purchases	13,237	13,808	16,603	15,589	14,477	13,082
Payments on principal	104,689	134,024	134,604	123,430	129,114	72,558
Income and Social Security taxes	7,926	7,287	3,762	4,358	7,813	6,688
Net new savings and investment	−5,739	4,011	−5,206	13,320	−8,233	−7,019
Total living expenses	26,439	25,439	24,965	24,235	36,239	19,046
Living — capital purchases	3,403	4,011	3,777	2,991	3,640	3,208
Total uses	**$264,664**	**$314,557**	**$299,909**	**$302,828**	**$322,638**	**$197,170**

[a] Records were sorted into thirds according to total noncapital living expenses.
[b] Modified-cost basis, except the land value, which was held at the same current value for January 1 and December 31.

including land at current value and machinery at depreciated value;

- Living expenses increased slightly, while capital farm purchases remained at minimum levels;
- Principal repayments exceeded the amount of money borrowed by the largest amount, $12,817, since this study began in 1972;
- Withdrawals from savings exceeded transfers into savings;
- Income and Social Security taxes paid increased by $639, and the total amount of taxes paid, $7,926, was the largest amount since 1979.

The 1988 records from three- to five-member families were sorted into high one-third and low one-third groups according to the family's total living expenses (see Table 3). The total cash living expenses for the high-third group averaged $36,239, compared with $19,046 for the low-third group. The high-third group farmed 281 more acres than the other group and owned 15 percent of the land farmed; the low-third group owned 17 percent of the land farmed. The results indicate that the low-third group had more nonfarm taxable income. The high-third group had 85 percent more outstanding debt and a higher net farm income. When net farm income is added to net nonfarm income, and total family living expenses—including capital purchases for family living—and payments for income and Social Security tax are subtracted, the low one-third group had $14,748 more dollars remaining than the high one-third group.

Living expenses included cash expenditures for food, operating expenses, clothing, personal items, recreation, entertainment, education, transportation, life insurance, contributions, and medical expenses. The sample of 365 farms contained 39 more tillable acres than the average of all the recordkeeping farms in the state. Management was also considered slightly above average. In view of these factors, average total living expenses for all recordkeeping families (excluding capital purchases) are estimated to be between $21,000 and $23,000 or 15 to 20 percent below the average total living expenses of these 365 central Illinois farms. When the $9,654 net nonfarm income for 1988 is used for living expenses, the remaining $20,188 must be generated from the farm business to pay the $29,842 used for total living expenses including family living capital purchases. The figure, $20,188, amounts to $31 per tillable acre farmed.

Income changes on Illinois farms

The average operator's net farm income for all farms in 1988 was $24,917; it was $41,546 in 1987 (Table 4). Operator net farm incomes decrease steadily as a higher percent of gross farm returns is used to pay interest. On the average, when more than 25 percent of gross farm returns is used to pay interest, the operator's net farm income is usually negative. This held true in 1988. Interest paid as a part of gross farm returns for all operators averaged 9.8 percent in 1988; 9.2, in 1987; 12.2, in 1986; 13.1, in 1985; and 14.3, in 1984.

Table 4. Percent of Illinois Farms and Operator Net Farm Income by Interest Paid as a Percent of Gross Farm Returns, 1984 Through 1988

	Percent of Gross Farm Returns Paid for Operator Interest							
	Under 10	10-14.9	15-19.9	20-24.9	25-29.9	30-34.9	35+	All
Percent of farms								
1984	48	14	11	9	6	4	8	100
1985	50	16	12	8	5	4	5	100
1986	54	15	11	7	5	3	5	100
1987	65	14	9	5	3	2	2	100
1988	62	15	9	6	4	1	3	100
Net farm income								
1984	21,263	10,757	6,814	−3,482	−12,877	−17,365	−40,520	7,813
1985	32,771	26,677	19,187	9,250	−1,623	−10,547	−26,242	21,870
1986	31,182	26,241	19,308	13,866	5,783	−3,917	−21,399	23,046
1987	47,596	38,779	35,292	25,667	18,434	11,663	−5,440	41,546
1988	32,526	24,040	14,720	8,712	−799	−6,419	−19,517	24,917

Comparative costs and returns between years and among major types of farming operations in northern and central, and in southern Illinois are reported in Tables 5, 7, and 8. The separation of farms into northern and central, and southern Illinois is based on soil-type regions that divide the state approximately on an east-west line from Mattoon to Alton. The sample consisted of grain, hog, beef, and dairy farms having between 340 and 799 acres or an average of 553 acres. Labor available on farms of this size averaged 14 months on grain farms, 22 months on hog farms, 18 months on beef farms, and 26 months on dairy farms. This year is the second that data from this size range have been presented. Tables 5, 7, and 8 in previous years included farms ranging in size between 340 and 499 acres. The data in the tables are presented as if the farms were all owner operated. For leased farms, the landlord and tenant shares of the business were combined. Depending on the location, between 55 and 75 percent of the land in Illinois is tenant operated, primarily under crop-share and a small number of livestock-share leases.

Size of farm, type of farm, quality of soil, and managerial inputs have been held reasonably constant by the sampling procedure used in selecting farms within each category. Variations among figures for 1987, 1988, and the 5-year average are due to changes in farm prices and to costs, weather, and internal farming adjustments. The data in Tables 5, 7, and 8 are particularly helpful for comparing types of farming and for evaluating changes in farm costs and returns for a particular size and kind of farm. The data do not reflect overall farming adjustments due to the enlargement of farms or to major changes in the use of resources.

The figure for net farm income comprises returns to the farm family for all unpaid labor, interest on all invested capital, and the managerial inputs used in farming. Changes in the value of farm inventories and that of consumed farm products are included as income. Net farm income is calculated by accounting methods comparable to the accrual method used in calculating taxable farm income for the federal income tax. Two important differences in the accrual method of income tax accounting should be noted: the provision for capital gains on livestock sales, which was in effect until 1987, and the inclusion of interest paid as a farm expense. The operator's share of net farm income, which is listed below total net farm income in many tables, does have the interest expense deducted from it.

The figures for net farm income is the amount available from the farm business for living costs, income and Social Security taxes, debts, new investments, and savings. Interest must also be paid from total net farm income, but not the operator's share because it has already been subtracted. New capital investments for the farm business have been included with total cash expenditures. Although the cash balance reflects the cash position of the farm business, the figure is influenced by purchases and sales of feed and livestock and by changes in liabilities and borrowed funds.

The investment per farm is established as an average of the investments in farm inventory on January 1 and December 31. Physical quantities of grain and livestock are valued at farm market prices. Machinery, buildings, and soil fertility are valued at the remaining capital cost: original cost less depreciation as allowed for income tax deductions to date. Land is priced at current values, with the same value used for the beginning- and end-of-the-year land inventories. A base land value is established for each farm on the basis of a soil-productivity rating adjusted to a current value each year by using the February index of land prices in Illinois. The procedure used for adjusting the land value is described in the definitions of soil-productivity rating and of the value of land (the current basis) on pages 2 and 3. The annual change in land values represents an accounting adjustment to bring land values to current market levels.

Table 5. Averages for Selected Total Farm Items on 340- to 799-Acre Northern and Central Illinois Grain, Hog, and Beef Farms

	Grain farms			Hog farms			Beef farms		
	1988	1987	1984-1988 average	1988	1987	1984-1988 average	1988	1987	1984-1988 average
Number of farms	809	763	789	255	195	234	53	52	65
Total acres	559	558	549	535	525	524	523	526	518
Soil-productivity rating	87	87	87	83	81	81	78	80	80
Cash operating income	$ 169,816	$ 176,412	$ 168,359	$ 306,201	$ 347,418	$ 303,078	$ 485,333	$ 572,841	$ 458,682
Less purchased feed and livestock	13,932	21,523	8,720	101,256	115,267	93,872	313,544	363,750	277,121
Net cash operating income	$ 155,884	$ 154,889	$ 159,639	$ 204,945	$ 232,151	$ 209,206	$ 171,789	$ 209,091	$ 181,561
Accounts receivable change	−10,292	3,135	950	−9,252	3,498	525	−6,437	1,906	1,180
Inventory change	−10,727	1,598	−4,676	−12,672	−86	−160	4,561	21,254	6,462
Farm products used	274	224	279	573	599	579	995	996	919
Value of farm production	$ 135,139	$ 159,846	$ 156,192	$ 183,594	$ 236,162	$ 210,150	$ 170,908	$ 233,247	$ 190,122
Total cash operating expenses	72,311	68,899	73,189	97,880	101,336	98,561	87,711	95,207	90,105
Prepaid-unpaid change	−1,270	−1,944	−815	292	−4,136	−766	−1,714	−3,996	−1,035
Annual depreciation	12,446	15,165	17,349	26,400	32,470	32,192	25,227	32,905	31,012
Net farm income	**$ 51,652**	**$ 77,726**	**$ 66,469**	**$ 59,022**	**$ 106,492**	**$ 80,163**	**$ 59,684**	**$ 109,131**	**$ 70,040**
(Operator's share)[a]	(17,140)	(32,132)	. . .[b]	(18,648)	(54,758)	. . .[b]	(19,146)	(59,327)	. . .[b]
Unpaid labor charge	14,810	14,674	14,131	17,917	17,747	17,607	15,472	16,231	15,578
Returns to capital and management	36,842	63,052	52,338	41,105	88,745	62,556	44,212	92,900	54,462
Interest charge on capital	59,300	56,865	60,949	67,763	65,125	69,496	73,182	74,963	77,189
Management returns	**$ −22,458**	**$ 6,187**	**$ −8,611**	**$ −26,658**	**$ 23,620**	**$ −6,940**	**$ −28,970**	**$ 17,937**	**$ −22,727**
Total cash income[c]	171,112	177,682	169,488	307,089	348,350	304,019	486,162	573,321	459,493
Total cash expenditures[c]	95,634	99,246	92,778	220,726	240,491	213,854	423,351	477,436	387,354
Cash balance	$ 75,478	$ 78,436	$ 76,710	$ 86,363	$ 107,859	$ 90,165	$ 62,811	$ 95,885	$ 72,139
Capital purchases	9,647	9,028	11,128	21,806	24,042	21,579	22,246	18,537	20,211
FARM INVESTMENT									
Livestock inventory	$ 244	$ 265	$ 217	$ 84,811	$ 98,282	$ 90,198	$ 199,314	$ 207,544	$ 185,241
Grain inventory	90,054	98,100	104,883	81,451	77,873	83,615	68,764	79,120	83,945
Remaining capital cost in:									
Machinery and auto	16,897	20,341	26,991	31,510	34,153	39,451	30,254	34,271	39,569
Buildings and fence	19,502	21,639	23,672	53,768	63,845	68,733	46,645	57,749	58,354
Soil fertility	63	58	60	125	96	116	4	0	1
Value of land (current basis)	$ 941,635	$ 877,378	$1,010,662	$ 821,834	$ 715,329	$ 841,128	$ 744,248	$ 711,803	$ 828,109
Total farm investment	$1,068,395	$1,017,781	$1,166,485	$1,073,499	$ 989,578	$1,123,241	$1,089,229	$1,090,487	$1,195,219
Rate earned on investment, percent	3.45	6.20	4.49	3.83	8.97	5.57	4.06	8.52	4.56

[a] Interest expense deducted from operator's share only.
[b] Data not available.
[c] Includes sales or purchases of capital items.

The land adjustment index for 1988 was 7 percent above that of 1987.

Northern and central Illinois farms

Grain farms. The net farm income for northern and central Illinois grain farms having 340 to 799 acres and no livestock averaged $51,652 in 1988, with the operator's and landlord's shares combined (Table 5). This income was $26,074 below that of 1987, and $14,817 below the 5-year average income from 1984 through 1988. The decline in income was caused by a decrease of $24,707 in the gross value of production and an increase of $1,367 in cash operating expenses and depreciation.

The most important factor affecting incomes on northern and central Illinois grain farms was reduced yields because of the drought that occurred during the summer of 1988. Average corn yields were 69 bushels per acre lower than in 1987 and soybean

yields averaged 7 bushels per acre lower. Higher grain prices partially offset the reduced yields, but the value of inventories on hand at the end of the year was $10,727 lower than the value at the beginning of the year. Higher grain prices also resulted in lower government farm program deficiency payments paid and accrued at year's end. Accounts receivable, which basically consisted of accrued or earned deficiency payments, were $10,292 lower at the end of the year than at the beginning of the year. Most farmers continued to participate in the government farm program, setting aside 20 percent of their corn acreage base.

Prices received for soybeans and corn were 31 to 26 percent above prices received the previous year. Total operating expenses increased 6 percent, and total depreciation dropped 18 percent. The decline in depreciation is the result of low levels of capital purchases the past few years. As in the previous year, partial payments to farmers participating in the government's farm program came in the form of PIK certificates. The marketing strategy that began in 1986 continued. This strategy involves redeeming the corn under government loan with PIK certificates.

Table 6. Average Cost per Tillable Acre to Grow Corn and Soybeans on Central Illinois Grain Farms with No Livestock

	Corn		Soybeans	
	1988	1987	1988	1987
Number of farms	578	516	578	516
Acres grown per farm	295	249	294	294
Yield per acre, bu.	83	156	30	47
Variable nonland costs				
Soil fertility	$ 54	$ 45	$ 18	$ 15
Pesticides	21	19	25	19
Seed	22	22	12	13
Drying and storage	7	18	3	4
Machinery repairs, fuel, and hire	27	30	23	25
Total, variable costs	$131	$134	$ 81	$ 76
Other nonland costs				
Labor	$ 30	$ 32	$ 27	$ 29
Buildings and storage	8	8	4	5
Machinery depreciation	22	26	17	21
Nonland interest	22	27	20	24
Overhead	12	11	12	11
Total, other costs	$ 94	$104	$ 80	$ 90
Total, nonland costs	$225	$238	$161	$166
Land costs				
Taxes	$ 21	$ 21	$ 21	$ 21
Adjusted net rent	97	92	97	92
Total, land costs	$118	$113	$118	$113
Total, all costs	$343	$351	$279	$279
Nonland cost per bu	$ 2.71	$ 1.53	$ 5.37	$ 3.53
Total, all costs per bu	$ 4.13	$ 2.25	$ 9.30	$ 5.94
Average yield, past 4 years	144	158	45	47
Total, all costs per bu.	$ 2.38	$ 2.22	$ 6.20	$ 5.94

Although accrual incomes dropped significantly, cash incomes declined by only $2,958. The main reason for the drop in accrual incomes was the decline in the value of inventories and accounts receivable. The gross value of production was at its lowest level since at least 1982. Capital purchases continued at low levels: only $17 per tillable acre. The rate earned on investment dropped to its lowest level in 4 years, 3.45 percent. This was the lowest rate earned in 1988 for any type of farm. In 1987, the rate was 6.20 percent. The average rate earned on investment for the last 5 years was 4.49 percent. Negative management returns of $22,458 were the lowest since at least 1982.

A study of the cost to grow corn and soybeans on central Illinois farms is summarized in Table 6. These farms had a soil-productivity index ranging from 86 to 100. The farms used 87 percent of their tillable land to grow corn and soybeans, with 44 percent of the acres in corn and 43 percent in soybeans. The table compares 1988 costs per acre with the 1987 costs. In 1988, the total cost per acre averaged $343 for corn and $279 for soybeans. From 1987 to 1988, it dropped 2 percent for corn and remained the same for soybeans.

Nonland costs of $2.71 per bushel for corn and $5.37 for soybeans in 1988 are the most relevant costs for continuing production in the short run, especially where land is free of debt. Significantly lower yields with little change in total costs resulted in a dramatic increase in the cost per bushel. If the 1988 yields had been 144 for corn and 45 for soybeans or the same as the average for the period from 1985 through 1988, the total cost per bushel would have been $2.38 for corn and $6.20 for soybeans. These costs do not include a charge for management.

The cost of fertility for soybeans was allocated on the basis of phosphorus, potassium, and lime removals, with the residual allocated to corn. The total unpaid labor charge was based on the labor available. The nonland interest rate was 10 percent of one-half the average of the beginning- and end-of-year inventory values for the crops on hand, plus one-half the cash-operating expenses (excluding interest paid), plus the depreciated value of machinery and buildings. The adjusted net rent was the average net rent received by crop-share landlords as reported on recordkeeping farms for the period from 1984 through 1987.

Hog farms. The net farm income in 1988 for northern and central Illinois hog farms having 340 to 799 acres averaged $59,022, with the operator's and landlord's shares combined (Table 5). Net incomes were $47,470 lower than net incomes in 1987, and $21,141 lower than the average for the 5-year period from 1984 through 1988. The net farm income for this group in 1988 was the lowest of any of the last 4 years. Lower yields and selling prices for hogs, combined with higher feed costs, resulted

in these markedly lower incomes. The value of farm production decreased 22 percent, while operating expenses, other than feed costs, increased 1 percent. The 1988 value of production was the lowest since 1983.

Management returns were a negative $26,658, a decrease of $50,278 from 1987 returns and $19,718 below the 5-year average from 1984 through 1988. Capital purchases decreased by $2,236, compared with 1987's purchases, but they were still above the 1984 through 1988 average. Cash livestock sales declined by $39,629 in 1988 compared with 1987 figures, reflecting the lower selling price for hogs. The average number of litters farrowed for this group was 211.

Reduced earnings caused the rate earned on investment to drop to 3.83 percent in 1988, compared with 8.97 percent in 1987. The 5-year average rate was 5.57 percent. The 1988 rate earned on investment was the lowest since 1984, and the second lowest for any type of farm in 1988. The 5-year average earning rate, however, is the highest for any type of farm in northern and central Illinois.

Beef farms. The net farm income for northern and central Illinois beef farms having 340 to 799 acres averaged $59,684 in 1988, with the operator's and landlord's shares combined (Table 5). This figure was $49,447 lower than the 1987 figure and $10,356 lower than the average from 1984 through 1988.

Higher feed costs and replacement cattle prices, along with lower grain yields, contributed to the reduced earnings. The average price paid for feeder cattle increased 12 percent in 1988, compared with 1987 prices. Prices received for fat cattle increased 8 percent over 1987 prices. The value of farm production decreased $62,339, or 27 percent in 1988 compared with 1987. It was also $19,214 below the 5-year average for 1984 through 1988. These farms produced 2,265 hundredweight of beef per farm, or weight-gain equivalents of 477 head, each gaining 475 pounds.

Management returns for these farms were $46,907 below 1987 returns and $6,243 below the 5-year average from 1984 through 1988. This average from 1984 through 1988 for management returns was a *negative* $22,727. The positive management returns for 1987 were the only time in the last 6 years that management returns have not been negative for these farms. Low returns have drawn very little new capital into these types of farms. The average investment in machinery and buildings for these farms in 1988 was 58 percent of the 1983 level of investment. Improved earnings in 1987 contributed to increased capital purchases in 1988. Capital purchases were $22,246 or 20 percent above the amount spent in 1987, and 10 percent above the 5-year average from 1984 through 1988. The net cash balance for these farms was $62,811—13 percent below the average for the same 5-year period.

Cost and returns to produce beef from 1985 through 1988, based on a detailed breakdown of individual costs from a selected sample of beef farms, are shown in Table 14. Except for 1987, total costs exceeded total returns during the last 4 years. This analysis is discussed in detail under the livestock section on feeder-cattle enterprises.

The average rate earned on investment decreased from 8.52 percent in 1987 to 4.06 percent in 1988. The 5-year average rate earned on investment from 1984 through 1988 was 4.56 percent. The rate earned on investment in 1987 was larger than it was in any of the last 6 years. Although the value of land on these farms increased in 1988, the average total farm investment decreased for the seventh consecutive year. It will take a number of years of good returns like those realized in 1987 before these farms draw resources from alternative enterprises.

Farms on which beef cattle are raised or fed continue to compete for resources in Illinois, where nonmarketable resources, such as roughage, labor, and buildings, or very high levels of management are available. Along with other livestock enterprises, feeder-cattle enterprises have benefited from relatively cheap feed prices and improved selling prices. In recent years, this type of farm has survived primarily where there are large amounts of debt-free capital that has been combined with very high levels of management.

Dairy farms. The net farm income for northern and central Illinois dairy farms having 340 to 799 acres averaged $68,763 in 1988, with the operator's and landlord's shares combined (Table 7). This figure was $22,341 below the 1987 figure but $3,448 above the 5-year average from 1984 through 1988. Although the 1988 income was lower than in 1987, it was the second highest income since 1983. The average number of cows on these farms was 70, 5 below the average for 1987.

Higher feed costs and lower milk prices reduced the earnings for these farms. The value of farm production was 15 percent lower than it was in 1987, and 5 percent lower than the average for the 5-year period from 1984 through 1988. Total operating expenses decreased 4 percent, while depreciation decreased 22 percent in comparison with depreciation in 1987. A detailed breakdown of the cost of producing milk can be found in Table 16. Management returns were a negative $8,377, but still $10,595 higher than the 5-year average from 1984 through 1988. Capital purchases of $16,549 were at the lowest level since 1983. The amount spent for capital purchases in 1988 was 22 percent lower than the amount spent in 1987.

The 1988 rate earned on investment for these farms was 5.78 percent; the 1987 rate was 8.08 percent. The 5-year average rate earned on investment was 4.69 percent. The 1988 rate earned on investment was the highest for any type of farm in central and northern Illinois. The average price re-

Table 7. Averages for Selected Total Farm Items on 340- to 799-Acre Northern Illinois Dairy Farms

	1988	1987	1984-1988 average
Number of farms	64	53	66
Total acres	479	487	483
Soil-productivity rating	72	72	71
Cash operating income	$ 254,368	$ 276,982	$ 243,086
Less purchased feed and livestock	62,880	70,847	51,640
Net cash operating income	$ 191,488	$ 206,135	$ 191,446
Accounts receivable change	−3,423	2,895	1,144
Inventory change	−2,481	8,665	1,592
Farm products used	1,991	2,703	2,370
Value of farm production	$ 187,575	$ 220,398	$ 196,552
Total cash operating expenses	96,419	103,327	99,822
Prepaid-unpaid change	989	−1,586	−69
Annual depreciation	21,404	27,553	31,484
Net farm income	**$ 68,763**	**$ 91,104**	**$ 65,315**
(Operator's share)[a]	(34,586)	(50,327)	. . . [b]
Unpaid labor charge	21,699	24,246	22,317
Returns to capital and management	47,064	66,858	42,998
Interest charge on capital	55,441	58,216	61,970
Management returns	**$ −8,377**	**$ 8,642**	**$ −18,972**
Total cash income[c]	254,551	277,459	244,227
Total cash expenditures[c]	174,752	193,627	168,871
Cash balance	$ 79,799	$ 83,832	$ 75,356
Capital purchases	16,549	21,086	18,738
FARM INVESTMENT			
Livestock inventory	$ 94,361	$ 101,425	$ 97,804
Grain inventory	57,832	62,602	65,161
Remaining capital cost in:			
Machinery and auto	29,088	35,646	42,935
Buildings and fence	59,701	79,718	85,533
Soil fertility	22	36	12
Value of land (current basis)	573,609	547,804	625,686
Total farm investment	$ 814,613	$ 827,231	$ 917,131
Rate earned on investment, percent	5.78	8.08	4.69

[a] Interest expense deducted from operator's share only.
[b] Data not available.
[c] Includes sales or purchases of capital items.

ceived for milk in 1988 decreased slightly in comparison with the 1987 price. The partial liquidation of the dairy herd in this country due to the government's dairy-herd buyout program and the consequent lower supply of milk resulted in milk prices increasing slightly in 1987. Increased production per cow, however, has more than offset the reduced herd in this country and an increase in total milk production is expected. This will continue to push down the price of milk.

The price received for beef from all cull animals and vealers sold from the dairy herd can be an important factor in determining total returns. When beef prices were high, those sales accounted for as much as 20 percent of the total income from the dairy enterprise. But when the beef prices are low, this source of income is only 10 to 12 percent of the total. In 1988, the returns from beef accounted for 17 percent of the total returns to the dairy herd, in comparison with 16 percent in 1987.

Southern Illinois farms

Grain farms. The net farm income for southern Illinois grain farms having 340 to 799 acres averaged $59,281 in 1988, with the landlord's and operator's shares combined (Table 8). This income is $1,782 above net farm income in 1987 and $12,900 above the average from 1984 through 1988. Although grain yields were lower than the year before, the drought that occurred in the southern one-third of Illinois was not as severe as what happened in northern and central Illinois. The drop in grain yields was more than offset by higher grain prices, as evidenced by the fact that the value of farm production in 1988 was $429 more than in 1987, and the highest since 1982. Depreciation expense for 1988 was 29 percent below the average for the period from 1984 through 1988. The cash income of $57,120 was the highest since at least 1982.

Capital purchases, although still relatively low, were the highest since 1983. They totaled $12,119 in 1988. That figure is equal to $21 per tillable acre; capital purchases in 1981 were equivalent to $43 per tillable acre.

Management returns for these farms of $4,948 were higher than they were in any of the last 6 years. The 5-year average from 1984 through 1988 for management returns was a *negative* $7,703. The rate earned on investment decreased in 1988 to 6.56 percent; in 1987, this rate was 6.66 percent. The average rate earned on investment for the period from 1984 through 1988 was 4.43 percent and below the average rates for any other types of farms. The 1988 average rate of investment was the second highest for any type of farm in the state.

Hog farms. The net farm income for southern Illinois hog farms having 340 to 799 acres averaged $61,551 in 1988, with the landlord's and operator's shares combined (Table 8). This income was $31,132 lower than net farm income in 1987 and $2,077 lower than the average net farm income of $63,628 earned from 1984 through 1988. Lower corn yields, lower hog prices, and higher feed costs contributed to the decline in earnings. The value of farm production was down $34,491 in 1988, or 17 percent lower than it was in 1987.

Management returns for 1988 dropped $32,149, compared with returns for 1987. For the period from 1984 through 1988, management returns averaged a *negative* $1,889. Capital purchases of $22,736 in 1988 were $5,715 lower than in 1987 but were $2,691 above the average for the period from 1984 through 1988. Increasing land values led to total farm investment increasing for the second year in a row, after declining for 5 years in a row.

Table 8. Averages for Selected Total Farm Items on 340- to 799-Acre Southern Illinois Grain, Hog, and Dairy Farms

	Grain farms			Hog farms			Dairy farms		
	1988	1987	1984-1988 average	1988	1987	1984-1988 average	1988	1987	1984-1988 average
Number of farms	257	306	288	91	85	105	48	53	59
Total acres	582	580	574	558	541	543	501	514	504
Soil-productivity rating	60	60	60	60	60	59	60	59	60
Cash operating income	$143,204	$147,448	$134,360	$260,471	$279,080	$244,551	$256,898	$269,930	$238,556
Less purchased feed and livestock	13,947	23,317	13,777	79,418	85,334	75,268	51,456	50,607	46,363
Net cash operating income	$129,257	$124,131	$120,583	$181,053	$193,746	$196,283	$205,442	$219,323	$192,193
Accounts receivable change	−1,486	494	153	−1,330	475	107	161	56	90
Inventory change	2,768	5,645	1,501	−9,417	10,943	3,005	4,523	17,142	7,402
Farm products used	828	668	773	1,064	697	898	1,848	1,477	1,842
Value of farm production	$131,367	$130,938	$123,010	$171,370	$205,861	$173,293	$211,974	$237,998	$201,527
Total cash operating expenses	61,715	59,332	60,565	85,393	88,949	82,461	94,237	100,191	93,139
Prepaid-unpaid change	−1,505	−1,326	−767	−953	−2,902	−951	−1,393	−1,830	−805
Annual depreciation	11,876	15,433	16,831	25,379	27,131	28,155	23,902	31,208	32,660
Net farm income	**$ 59,281**	**$ 57,499**	**$ 46,381**	**$ 61,551**	**$ 92,683**	**$ 63,628**	**$ 95,228**	**$108,429**	**$ 76,533**
(Operator's share)[a]	(27,750)	(26,426)	. . .[b]	(28,991)	(55,905)	. . .[b]	(62,697)	(74,713)	. . .[b]
Unpaid labor charge	15,681	15,875	15,090	17,843	18,254	17,141	21,224	22,732	20,719
Returns to capital and management	43,600	41,624	31,291	43,708	74,429	46,487	74,004	85,697	55,814
Interest charge on capital	38,652	36,871	38,994	48,609	47,181	48,376	48,423	49,532	51,946
Management returns	**$ 4,948**	**$ 4,753**	**$ −7,703**	**$ −4,901**	**$ 27,248**	**$ −1,889**	**$ 25,581**	**$ 36,165**	**$ 3,868**
Total cash income[c]	144,228	148,210	135,301	261,106	279,911	245,300	257,392	270,214	239,306
Total cash expenditures[c]	87,108	92,852	84,437	186,901	202,439	177,305	165,159	172,761	159,280
Cash balance	$ 57,120	$ 55,358	$ 50,864	$ 74,205	$ 77,472	$ 67,995	$ 92,233	$ 97,453	$ 80,026
Capital purchases	12,119	10,689	10,704	22,736	28,451	20,045	20,549	22,640	20,810
FARM INVESTMENT									
Livestock inventory	$ 13,552	$ 14,926	$ 12,164	$ 76,385	$ 85,152	$ 71,919	$ 98,173	$104,973	$ 94,291
Grain inventory	61,387	58,156	58,365	67,005	62,027	59,799	59,431	60,613	58,227
Remaining capital cost in:									
Machinery and auto	17,964	20,891	26,692	28,470	28,310	35,644	33,663	39,079	47,101
Buildings and fence	10,878	11,806	13,858	39,888	39,113	39,644	28,593	36,384	41,618
Soil fertility	71	91	105	6	7	64	0	0	24
Value of land (current basis)	560,329	519,525	595,610	522,133	478,681	549,838	486,474	457,604	529,658
Total farm investment	$664,181	$625,395	$706,794	$733,887	$693,290	$756,908	$706,334	$698,653	$770,919
Rate earned on investment, percent	6.56	6.66	4.43	5.96	10.74	6.14	10.48	12.27	7.24

[a] Interest expense deducted from operator's share only.
[b] Data not available.
[c] Includes sales or purchases of capital items.

As with central and northern Illinois hog farms, the rate earned on investment by southern Illinois hog farms decreased substantially. In 1988, the rate declined to 5.96 percent from 10.74 percent in 1987. The average rate earned on investment for the period from 1984 through 1988 was 6.14 percent. The rate earned on investment in this 5-year period for this type of farm was the second highest of any type of participating farm in Illinois.

Dairy farms. The net farm income in 1988 for southern Illinois dairy farms having 340 to 799 acres averaged $95,228, with the operator's and landlord's shares combined (Table 8). This figure is $13,201 below the net farm income earned in 1987, but still $18,695 or 24 percent above the average for the period from 1984 through 1988. This net farm income was the highest earned by any type of participating farm of this size in Illinois in 1988. Lower grain yields and milk prices, combined with higher feed costs, reduced the value of farm production by

11 percent. The net cash operating income declined by $13,881, while cash operating expenses dropped by $5,954.

The net cash balance for these farms of $92,233 was the second largest of any of the last 6 years and $12,207 above the 5-year average from 1984 through 1988. Total farm investment increased for the first time since it began declining in 1982.

Management returns for this type of farm were a positive $25,581 in 1988; these returns were a positive $36,165 in 1987. The 5-year average from 1984 through 1988 was a positive $3,868. The rate earned on investment of 10.48 percent was the highest in the state for this size of participating farm. The average rate earned on investment in 1987 was 12.27 percent, and the 5-year average from 1984 through 1988 was 7.24 percent. The average rate earned on investment by these southern Illinois dairy farms from 1984 through 1988 was the highest of any type of participating farm with 340 to 799 acres in Illinois. In 1988, the average value of bare land on these farms was $1,053 per tillable acre. On northern Illinois dairy farms, this value was $1,438 per tillable acre. Building investments in 1988 averaged $14 less per acre than in 1987.

The average number of milk cows per farm in 1988 was 78, compared with 84 in 1987, and 79, the past 5-year average. The average of 78 cows in 1988 was 8 more than the average on farms of similar size and type in northern Illinois. In 1988, southern Illinois farms decreased the size of their herds by 6 milk cows over the 1986 herd size, while northern Illinois farms decreased theirs by 5.

LIVESTOCK ENTERPRISES

The return per $100 of feed fed from various livestock enterprises and the price of corn during each of the past 15 years are given in Table 9. Fifteen-year and 5-year averages are also shown. The difference between the average return figure and a feed cost of $100 represents the margin available for labor, depreciation on equipment, cash expenses other than feed, interest on investment, and profit.

The margin needed to cover nonfeed costs varies with the kind of livestock and depends on the proportion of total production costs represented by feed. The 15-year averages from 1974 through 1988 represent the approximate level of return at which farmers have been willing to maintain livestock production. The average may not represent a break-even return on all farms because some farmers may discount market prices for some of the resources used in producing livestock. If farmers already have facilities for livestock, they only need to cover direct operating costs in order to continue production. However, when they view livestock production as a new or a long-term enterprise, they hope to cover all costs, both fixed and variable. Otherwise they may not undertake the enterprise.

Table 9. Returns per $100 Feed Fed to Different Classes of Livestock

Year	Farrow-to-finish hogs	Feeder-pig finishing	Feeder-pig production	Feeder cattle bought	Dairy cow herds	Beef cow herds	Native sheep raised	Yearly price of corn
	dollars							
1974	121	108	NA	64	138	41	94	3.00
1975	191	158	NA	134	146	95	101	2.73
1976	152	118	176	93	168	91	105	2.55
1977	170	134	182	116	181	107	144	2.07
1978	208	151	255	170	217	199	159	2.13
1979	136	107	194	149	220	183	148	2.44
1980	138	122	153	111	207	144	131	2.80
1981	138	115	174	107	200	100	84	2.98
1982	213	165	237	147	205	115	83	2.43
1983	141	118	163	134	178	115	78	3.06
1984	155	140	170	141	188	105	102	3.12
1985	166	129	170	121	202	101	130	2.54
1986	215	178	254	149	210	125	156	2.01
1987	217	168	232	196	237	168	141	1.61
1988	152	127	158	150	198	150	115	2.32
Avereges								
1974-1988	168	136	NA	132	193	123	118	2.52
1974-1978	168	134	NA	115	170	107	121	2.50
1979-1983	153	125	184	130	202	131	105	2.74
1984-1988	181	148	197	151	207	130	129	2.32

As individual farmers try to increase profits, they tend to curtail livestock production when the return per $100 of feed fed is below the 15-year average. This tendency on the part of producers causes supplies of livestock products to fluctuate.

In farrow-to-finish hog production, returns tend to follow a noticeably cyclical pattern (Table 9). They tend to exceed the 5-year average for one or 2 years and then drop below this average for one or 2 years. Returns per $100 feed fed of $152 in 1988 were well below the 5-year average of $181.

The returns from feeder cattle vary greatly from year to year. The long-run averages shown in Table 10 indicate that the cattle-feeding business has not been paying average market rates for all resources used by the enterprise. Very little return, therefore, has been available to pay for labor or for facilities. Above-average skills are needed in buying, selling, and feeding to meet the competition from other uses for time and money on farms with feeder cattle. Identifying cyclical income movements over a 15-year period in the beef-cattle industry is difficult because this industry is more complex and adjusts more slowly than other livestock enterprises.

The returns above feed costs for dairy enterprises of $1,116 per cow in 1988 were only slightly above the 5-year average of $1,106 (Table 10). These returns indicate that the average dairy enterprise has covered the total estimated cost of production of $1,095 per cow from 1984 through 1988.

For the beef-herd enterprise, the average returns above the cost of feed for the period from 1984 through 1988 provided a margin over cash costs, but fell far short of the return needed to cover all nonfeed costs (Table 10). The implication is that the beef enterprise competes most favorably on farms where

Table 10. Variation in Returns to Livestock Enterprise Units, 1984 Through 1988

	Farrow-to-finish hogs (per cwt)	Feeder-pig finishing (per cwt)	Feeder cattle (per cwt)	Dairy cattle (cow)	Beef herd (cow)[a]
Returns above cost of feed and purchased animals					
1984	$16.72	$10.98	$20.39	$ 995	$ 21
1985	16.71	7.00	8.86	1,054	5
1986	26.50	16.06	17.93	1,062	85
1987	25.09	13.28	30.47	1,301	212
1988	14.01	6.63	20.56	1,116	196
Five-year average	$19.81	$10.79	$19.64	$1,106	$104
Nonfeed costs, 1984 through 1988					
Direct cash	$ 6.05[b]	$ 4.00[c]	$12.20[b]	$ 380[b]	$ 30[c]
Other costs	11.75[b]	6.75[c]	13.75[b]	715[b]	185[c]
TOTAL	$17.80	$10.75	$25.95	$1,095	$215
Nonfeed cost for future production					
Direct cash	$ 6.50	$ 4.50[d]	$13.00[d]	$ 400	$ 30
Other costs	16.00	7.00	17.00	800	200
TOTAL	$22.50	$11.50	$30.00	$1,200	$230

[a] The feed cost for beef herds includes up to $60 of hay equivalent from salvage roughage.
[b] Estimates of annual nonfeed costs are based on enterprise cost studies of operative units from 1984 to 1987.
[c] Includes veterinary costs, utilities, fuel, and equipment repair costs, depreciation, from Table 6 in the *Farm Management Manuals* from 1984 to 1988.
[d] Includes interest on purchase cost: one-third year for feeder-pig finishing, and one-half year for feeder cattle.

the resources of labor, capital, and management are plentiful and have few alternate uses. In the beef-cow enterprise, returns above the cost of feed per cow averaged $104 during the last 5 years. In 1988, these returns were $196 and almost equaled the amount needed to cover all costs: about $215. The 1987 and 1988 returns to the beef-cow enterprise were the highest since returns in the 1978-1979 marketing year.

Raising livestock has become more competitive. Average profit margins are narrow. Fewer farmers are willing to stay in business because returns in some enterprises barely cover direct operating costs. Plans for expansion that require large investments for new facilities should be based on an estimated return that is high enough to cover all costs. Fluctuations in livestock returns can involve a risk in low-return years. The estimated nonfeed cost for future livestock production is also shown in Table 10.

Hog enterprises

The information on farrow-to-finish enterprises in Table 11 is based on a sample of 692 enterprises farrowing 10 litters or more per year. Farms were omitted from the sample if the number of hogs purchased exceeded 10 percent of the pigs weaned. This procedure eliminated from the sample those farms with combined farrowing and feeder-pig operations. (Information on feeder-pig finishing enterprises is given in Table 13.) The average size of farrow-to-finish enterprises on all recordkeeping farms increased to 192 litters in 1988. The 1988 records

Table 11. Hog Enterprises, 1988 Averages per Farm

	Farrow-to-finish enterprises		
	All farms	350 or more litters per farm	Feeder-pig production
Number of farms	692	92	19
Pork produced, pound	349,970	962,662	104,676
Pork produced per litter, pound	1,822	1,743	559
Total returns	$142,245	$396,914	$59,478
Value of feed fed	$ 93,189	$251,396	$37,435
Returns per $100 of feed fed	$ 152	$ 157	$ 158
Number of litters farrowed	192	552	187
Pigs farrowed per litter	9.47	9.49	9.84
Pigs weaned per litter	7.70	7.67	7.97
Litters farrowed per female year	1.86	1.99	1.93
Pigs weaned per female year	14.95	16.25	16.00
Number of pigs weaned	1,478	4,234	1,490
Death loss, percent of pounds produced	1.9	2.1	2.6
Weight per hog sold, pound	244	238	50[a]
	per 100 pounds produced		
Price received	$ 42.33	$ 42.93	$ 73.63[a]
Total return	$ 40.64	$ 41.23	$ 56.82
Feed cost	$ 26.63	$ 26.11	$ 35.76
Return above feed	$ 14.01	$ 15.12	$ 21.06
Farm grains, pound	302	302	306
Commercial feed, pound	81	83	125
Total concentrates, pound	383	386	431
Cost per 100 pounds of commercial feed	$ 17.15	$ 16.19	$ 18.32
Cost per 100 pounds of concentrates	$ 6.92	$ 6.76	$ 8.27

[a] The average weight sold and price received for the feeder-pig production enterprise is for the feeder pigs only.

summarized here for the "all farms" group show that returns of $14.01 above feed costs per 100 pounds of pork produced were $11.08 below the 1987 return of $25.09.

The 5-year average for returns above feed costs per 100 pounds produced was $19.81 (Table 10). Even the 5-year average can vary significantly because of the wide fluctuations in returns from year to year. Detailed cost records show that an average farmer with existing facilities needed a return above feed costs of $17.80 per 100 pounds to pay for all nonfeed costs during the past 5 years. The return above all costs during this 5-year period of $2.01 ($19.81 minus $17.80) was still not large enough to make farmers or lenders feel comfortable about expanding production with borrowed capital.

The farrow-to-finish enterprise records for 1988 reported in Table 11 were also sorted by the number of litters produced. One group farrowing 350 or more litters averaged 552 litters. Compared with the

Table 12. Average Costs and Returns for Farrow-to-Finish Hog Enterprises by Size of Enterprise, 1986 Through 1988

	Under 250 litters			250 litters or more		
	1988	1987	1986	1988	1987	1986
Number of farms	80	38	70	124	78	102
Tillable acres	269	213	230	550	376	422
Number of litters	142	159	157	439	440	424
	per 100 pounds of pork produced					
Total returns	$ 40.29	$ 46.31	$ 49.85	$ 41.48	$ 47.55	$ 49.89
Cash costs						
Feed	$ 27.88	$ 21.68	$ 23.82	$ 25.95	$ 20.60	$ 21.97
Operating expenses						
Maintenance and power[a]	3.68	3.57	3.05	3.45	3.49	3.44
Livestock expenses	1.93	1.81	1.81	1.71	1.52	1.69
Insurance, taxes, and overhead	.91	.83	.80	1.07	.95	.95
Total operating expenses	$ 6.52	$ 6.21	$ 5.66	$ 6.23	$ 5.96	$ 6.08
Total cash costs	$ 34.40	$ 27.89	$ 29.48	$ 32.18	$ 26.56	$ 28.05
Other costs						
Depreciation[b]	$ 2.84	$ 3.54	$ 3.62	$ 3.28	$ 4.28	$ 4.17
Labor	3.66	3.59	3.40	3.61	3.53	3.41
Interest charge on all capital	3.83	4.11	4.74	3.44	3.50	3.72
Total other costs	$ 10.33	$ 11.24	$ 11.76	$ 10.33	$ 11.31	$ 11.30
Total nonfeed costs	$ 16.85	$ 17.45	$ 17.42	$ 16.56	$ 17.27	$ 17.38
Total all costs	$ 44.73	$ 39.13	$ 41.24	$ 42.51	$ 37.87	$ 39.35
Return above all costs	$ −4.44	$ 7.18	$ 8.61	$ −1.03	$ 9.68	$ 10.54

[a] Includes utilities, machinery, equipment and building repairs, machine hire, and fuel.
[b] Includes machinery, equipment, and building depreciation.

average feed cost for all farrow-to-finish enterprises, the feed cost per 100 pounds of pork produced was only 52 cents lower for the 552-litter group. The large producers paid about $20 less per ton for commercial feed, and there was no difference in feed conversion. The prices received for hogs sold by large producers or the net at the farm was 60 cents higher than the net received by all producers.

A summary of the feeder-pig production enterprises is also reported in Table 11. In 1988, the average enterprise in this group produced 187 litters with a return of $158 per $100 of feed fed. On an average, 7.97 pigs per litter were weaned and sold at 50 pounds per head. The 1988 average price received per 100 pounds of feeder pigs sold was $73.63 or $36.82 per head. The average feed cost per 100 pounds of pork produced (pigs and breeding stock) was $35.76 for 431 pounds of concentrate.

A substantial profit margin is required to compensate for the risk and detailed management involved in hog production in comparison with the risk and management involved in other uses of the same resources. Large-scale hog production in modern confinement facilities requires high capital investments. The future recovery of this specialized capital investment is uncertain, and the salvage value of confinement hog facilities is low. In addition, acquiring the managerial skills necessary for the large-scale production of hogs in confinement may discourage any rapid expansion of large hog-producing units. Pork production appears to have stabilized at more moderate levels than in the past. With some increase in consumer demand, returns to hog production have improved significantly since 1979.

The data on hog enterprises in Table 12 show a detailed breakdown of costs and returns from a group of specialized commercial hog farms for 1986, 1987, and 1988. The value of the feed fed to hogs was more than 75 percent of the crop returns produced on these farms. This intensity of livestock feeding indicates a commitment of major resources to the hog enterprise. The producers in this group probably exercise a higher level of management and use more confinement production facilities than the average hog producer in Illinois.

The hog enterprise records summarized in Table 12 were sorted by the number of litters produced. The group farrowing fewer than 250 litters averaged 153 litters from 1986 to 1988; the group farrowing 250 or more litters averaged 434 litters during the same period.

The cost data reported in Table 12 have been divided into two categories: cash costs and other costs. This classification of production costs is important when short-term management decisions are being made concerning the volume of production, particularly during periods of low prices.

As reported in Table 12, cash costs of production in 1988 ranged from $32.18 to $34.40 per 100 pounds of pork produced, depending on the size grouping. Feed is included as a cash cost although for most producers a major share of the grain is raised on the farm. The readily available alternative cash market for grain makes the raised feed the same as cash.

Table 13. Feeder-Cattle and Feeder-Pig Finishing Enterprises, 1988 Averages per Farm

Items	Feeder cattle	Feeder-pig finishing
Number of farms	209	144
Total pounds produced	149,811	156,728
Total returns	$ 91,762	$ 48,248
Value of feed fed	$ 60,964	$ 37,851
Returns per $100 feed fed	$ 150	$ 127
Death loss, percent of pounds produced	1.9	2.1
Average weight purchased	633	49
Price paid per 100 pounds	$ 79.81	$ 85.42
Price received per 100 pounds	$ 68.94	$ 43.22
Average weight sold	1,095	238
	per 100 pounds produced	
Total returns	$ 61.25	$ 30.78
Feed cost	$ 40.69	$ 24.15
Return above feed	$ 20.56	$ 6.63
Farm grains, pound	587	300
Commercial feeds, pound	39	74
Total concentrates, pound	626	374
Hay, pound	80	...[a]
Corn silage, pound	508	...[a]
Other silage, pound	154	...[a]
Hay equivalent, pound	317	...[a]

[a] Data not available.

The other category of costs includes depreciation, labor, and an interest charge on all capital. Part of the labor and interest charge is a cash cost on most farms. The proportion of labor that is hired depends largely on the size of the farm. A one-man farm does not hire much labor, whereas a major share of the labor will be hired on a four-man farm.

Operating expenses and labor costs increased slightly in 1988, while depreciation and the interest charge on all capital declined substantially in relation to 1987. The result was significantly lower total nonfeed costs for both groups of farms. The group farrowing fewer than 250 litters averaged 60 cents lower in nonfeed costs than it did in 1987, and the group farrowing 250 litters or more averaged 71 cents lower in nonfeed costs for the same period. The total cost of production, however, increased for both groups because of the increased cost of corn and protein supplement in 1988.

The most significant cost difference between the two groups of farms was the feed cost. The average feed cost for 1986, 1987, and 1988 per 100 pounds of pork produced for the large enterprises was $1.62 lower than it was for the small enterprises. This difference in the amount of feed cost per farm for pork produced was an average of about $12,500 lower on farms with the larger enterprises. Differences in the amount of feed used per 100 pounds of pork produced and the price paid for commercial feeds caused this difference in feed costs.

From 1986 through 1988, the returns above all costs averaged $3.78 per 100 pounds of pork produced for the small enterprises and $6.40 for the large enterprises—a difference of $2.62. Management practices, such as the choice of building systems, method of transporting hogs to market, type of market used, and on- versus off-farm systems for feed-processing affect the individual cost items reported in Table 12. But the return above all costs should accurately reflect the relative efficiency of the two groups of hog enterprises.

Feeder-cattle and feeder-pig finishing enterprises

Data for 1988 on the feeder-cattle and feeder-pig finishing enterprises are presented in Tables 13 and 14. These enterprise summaries include weights and values on partly finished animals purchased in previous years and on animals purchased during the current year.

The average amount of pork produced per farm from feeder-pig enterprises was 156,728 pounds in 1988 (Table 13). At 175 pounds of gain per head, this figure amounted to 895 head fed per farm in 1988, down from the 921 head fed per farm in 1987.

The return above the cost of feed and purchased animals from 1984 through 1988 averaged $10.79 per 100 pounds of gain. This return would just about equal the $10.75 of all nonfeed costs for the past 5 years. It would still be below the estimated $11.50 required to cover all costs for future production (Table 10).

Given that a 475-pound unit of gain equals one head of feeder cattle, the average of 149,811 pounds of beef produced per farm in 1988 (Table 13) equals 315 head of feeder cattle per farm. That figure is an increase of 6 from the average of 309 head fed per farm in 1987. The return per $100 of feed for feeder-cattle enterprises was $150 in 1988 in comparison with a 5-year average of $151 and a 15-year average of $132 (Table 9).

The price paid for feeders was $8.73 per 100 pounds higher in 1988 than it was in 1987; the price received for cattle sold in 1988 was $5.13 higher per 100 pounds than the price received in 1987. The average weight of purchased animals was 642 pounds; the average weight of animals sold was 1,095 pounds. Feed cost was $40.69 per 100 pounds produced in 1988; it was $31.71 in 1987.

Each 100 pounds of beef produced required 626 pounds of concentrates and 80 pounds of hay. The amount of corn silage used in 1988 averaged 508 pounds; other silage averaged 154 pounds, making a total of 662 pounds. Silage utilization by the feeder-cattle enterprise has decreased the last 4 years since the 10-year average for the period from 1975 through 1984 reached 969 pounds per 100 pounds of beef produced. The use of 662 pounds per 100 pounds of beef produced in 1988 was the smallest amount fed since 1971. The high initial investment required for many silage feeding operations and a slowdown

Table 14. Average Costs and Returns for Beef-Feeding Enterprises, 1985 Through 1988

	1988	1987	1986	1985	1985-1988 average
Number of farms	41	33	49	46	42
Tillable acres	527	500	510	505	511
Hundredweight beef produced	2,845	3,320	3,069	2,911	3,036
Number head @ 475-pound gain equivalents	599	699	646	613	639
Average weight purchased, pound	655	642	643	650	648
Average weight sold, pound	1,127	1,105	1,094	1,116	1,111
Price received per 100 pounds sold	$ 68.76	$ 63.92	$ 57.56	$ 57.58	$ 61.96
Price paid per 100 pounds purchased	$ 81.04	$ 72.64	$ 60.38	$ 61.48	$ 68.89
			per 100 pounds of beef produced		
Cash costs					
Feed[a]	$ 40.46	$ 32.37	$ 35.84	$ 41.26	$ 37.48
Operating expenses					
Maintenance and power[b]	3.67	4.20	3.47	3.97	3.83
Livestock expense	2.80	2.36	2.07	2.04	2.32
Insurance, taxes, and overhead	1.12	1.49	1.33	1.49	1.36
Interest on cattle[c]	7.69	7.39	6.85	8.14	7.52
Total operating expense	$ 15.28	$ 15.44	$ 13.72	$ 15.64	$ 15.03
Total cash costs	$ 55.74	$ 47.81	$ 49.56	$ 56.90	$ 52.51
Other costs					
Depreciation[d]	$ 3.68	$ 4.74	$ 5.05	$ 5.09	$ 4.64
Labor	1.95	2.57	2.10	2.19	2.20
Interest on other capital	1.53	2.03	2.60	3.11	2.32
Total other costs	$ 7.16	$ 9.34	$ 9.75	$ 10.39	$ 9.16
Total all costs	$ 62.90	$ 57.15	$ 59.31	$ 67.29	$ 61.67
Total returns[e]	$ 58.78	$ 59.14	$ 54.50	$ 51.78	$ 56.05
Return above all costs	$ −4.12	$ 1.99	$ −4.81	$ −15.51	$ −5.62

[a] All grain fed was priced at the average market price for the year. Market values were used for roughage fed while protein and minerals were charged at cost. All the feed fed is assumed to have been marketable.
[b] Includes utilities, machinery, equipment and building repairs, machine hire and fuel.
[c] Interest is a charge on the average value of beginning- and end-of-year inventories on hand. The rate was 11 percent for 1985, 10 percent for 1986, 1987, and 1988.
[d] Includes machinery, equipment, and building depreciation.
[e] Sales less cost of purchased animals, plus or minus inventory value change. No credit has been calculated for reduced fertility cost when manure is applied to crops.

in capital purchases may denote more reliance on higher concentrate and dry roughage facilities.

These data do not show the wide variation in profits among cattle-feeding programs. The data in Tables 9, 10, and 13 on Illinois feeder-cattle enterprises reflect the composite results of all qualities and ages of cattle fed. The data are heavily weighted, with good-to-choice calves and yearlings as the predominant cattle-feeding system. Most farmers now feed more than one drove of cattle each year to better utilize their fixed investments in mechanized feedlots.

The return above the cost of feed and purchased animals averaged $19.64 per 100 pounds of beef produced from 1984 through 1988 (Table 10). During this period, returns ranged from $8.86 in 1985, to $30.47 in 1987. The returns above feed costs have remained below the estimated costs required to pay for all nonfeed costs for the average cattle feeder in 4 of the last 5 years. The 1987 returns above feed cost of $30.47 were record high, at least for the period since 1964.

The data in Table 14 on feeder-cattle enterprises show a detailed breakdown for the period from 1985 through 1988 on cost and returns to produce beef on beef-feeding farms. The farms included had no other livestock. All costs were accounted for either in crops or in the beef-feeding enterprise. The figure for feed costs is based on the assumption that all the grain and roughage fed was produced on the farm and was marketable.

The data show that these farms were finishing an average of 639 feeders each year from 1985 through 1988. The 4-year average total cash cost including feed and interest charged on cattle was $52.51 per 100 pounds of beef produced. The average total return of $56.05 for the same period exceeded total cash costs by only $3.54 per 100 pounds produced, or about $17 per feeder.

Some feeders may be able to discount some of these cash costs for roughage fed and for interest on cattle if they had no market for the roughage or were able to use their own money invested in cattle without paying interest. Other costs of $9.16 per 100 pounds of beef produced or $44 per feeder ($9.16 multiplied by 4.75 hundredweight of gain per feeder) include depreciation, labor, and interest. Adding the other costs to cash costs results in total costs of $61.67 per hundredweight over the 4-year period.

A number of cattle feeders in Illinois apparently will feed cattle if their return covers feed and cash costs but is short of paying market rates for some nonmarketable roughage, and fixed and overhead costs. But this number is expected to decline.

Farmer's values, goals, and attitudes have been important in maintaining production; but the dictates of the market, technological changes, and shifts in

the basic factors of supply and demand continue to cause changes. The return reflected in these averages for the feeder-cattle enterprise suggests that for profitable cattle-feeding operations, farmers must produce the kind of beef the consumer wants at the lowest possible cost. Even though farms may have nonmarketable feeds, unemployed labor, or fixed capital investments in facilities, these data indicate returns are not consistently high enough to justify the building of new facilities.

Dairy enterprises

The minimum size for a herd included in this analysis was 10 milk cows. The average herd size on recordkeeping farms increased steadily at an average of 1.8 cows per year from 42 in 1970 to 63 in 1982.

Table 15. Dairy Cattle Enterprises, 1988 Averages per Farm

	All farms	Efficiency	
		High[a]	Low[b]
Number of farms	171	55	54
Number of cows	68.8	72.2	66.6
Milk cows dry, percent	14.0	14.8	14.1
Animal units in herd	133	145	126
Total returns	$154,512	$184,277	$131,026
Value of feed fed	$ 77,705	$ 79,526	$ 79,792
Returns per $100 of feed fed	$ 198	$ 231	$ 164
Returns above feed per cow	$ 1,116	$ 1,450	$ 769
Total milk produced, 100 pounds	11,024	12,505	9,955
Pounds of milk per cow	16,023	17,319	14,947
Pounds of butterfat per cow	588	639	550
Total beef produced, pound	47,731	53,860	38,277
Pounds of beef per cow	693	745	574
Death loss, percent of pounds produced	8.7	6.6	11.2
Price received for:			
100 pounds of milk	$ 11.76	$ 11.96	$ 11.54
100 pounds of beef	$ 55.68	$ 57.56	$ 52.64
Per unit of milk and beef:[c]			
Feed cost	$ 49.18	$ 44.45	$ 57.89
Grain, pound	298	287	314
Protein and minerals, pound	94	87	116
Total concentrates, pound	392	374	430
Hay and dry roughage, pound	293	231	367
Corn silage, pound	439	356	565
Other silage, pound	374	387	429
Pasture days	. . .	. . .	1
Pasture days per animal unit	7	7	10
Hay equivalent per cow, tons	7.1	6.5	7.9
Concentrates per cow, pound	8,998	9,264	8,895

[a] High one-third return above feed per cow exceeds 1,191.
[b] Low one-third dairy return above feed per cow is below 910.
[c] 1,000 pounds of milk or 100 pounds of beef.

Herd size remained steady in 1986 at 63 cows but increased to 69 cows in 1987 and 1988.

The return per $100 of feed fed to dairy cattle in 1988 was $198. The average for the period from 1984 through 1988 was $207 (Table 9). In 1988, milk prices per hundredweight decreased 2 percent from 1987 levels. This decrease compares with an average annual decrease of 1.2 percent from 1983 to 1987. From 1987 to 1988, beef prices for all weights sold increased $1.50 per hundred pounds, while feed costs increased $6.76 per unit of milk or beef produced.

Dairy farmers have reduced the amount of pasture and dry hay and have increased the amounts of grain and silage fed over the past two decades. Pasture days per animal unit dropped from 145 in 1960, to 50 in 1970, to 10 in 1987. This shift indicates that significant pasture days are a thing of the past on nearly all dairy farms in this sample.

The dairy herds in Table 15 were subdivided into two groups according to their efficiency as measured by returns above the cost of feed per cow. In comparison with the low-efficiency group, the high-efficiency group had more cows in the herd, and 89 percent higher returns above feed per cow. Returns above feed per cow for the high-efficiency group were $1,450 and $769 for the low-efficiency group. For the high-efficiency group, two factors were most significant: 16 percent higher milk production per cow—an average of 17,319 pounds, compared with an average of 14,947 pounds for the low-efficiency group—and a 23 percent lower feed cost per unit of milk and beef produced.

The average return above feed costs per cow for all dairy herds was $1,116 in 1988 (Table 15). This figure compares with the 5-year average of $1,106 per cow (Table 10). The 5-year average return above feed cost required to pay market prices for all nonfeed costs is estimated to be about $1,095 per cow. The estimated return above feed costs currently required to attract new investments for dairy herds is about $1,200 per cow. Although the number of dairy herds has decreased, their size and efficiency have increased, and they have continued to increase the milk supply. Normal depreciation and wear-and-tear will soon require the reinvestment of greater amounts of capital in some of these businesses.

The data in Table 16 on dairy enterprises show a detailed breakdown of milk production costs and returns for dairy farms by the number of cows in the herd in the period from 1986 through 1988. The farms included had no other livestock. All costs were accounted for either in crops or in the dairy enterprise. The total costs for the dairy enterprise were reduced by the amount of income derived from an inventory increase in the pounds of beef produced or from sales, which was valued at the average price received for all weights of dairy animals sold from

Table 16. Average Milk Production Costs and Returns by Size of Herd, 1986 Through 1988

	40 to 79 cows in herd			80 or more cows in herd		
	1988	1987	1986	1988	1987	1986
Number of farms	107	98	123	50	65	57
Tillable acres	279	290	297	480	469	425
Number of cows	59.5	59.8	59.4	108.9	108.2	103.4
Milk per cow, pound	16,279	15,765	15,369	16,295	16,010	15,911
	per 100 pounds of milk produced					
Price received	$ 11.86	$ 12.08	$ 11.81	$ 12.04	$ 12.29	$ 11.77
Cash costs						
Feed	$ 6.01	$ 5.22	$ 5.44	$ 6.12	$ 5.05	$ 5.31
Operating expenses						
Maintenance and power[a]	1.20	1.24	1.25	1.23	1.37	1.23
Livestock expense	1.00	.94	.94	1.04	1.03	.98
Insurance, taxes, and overhead	.28	.27	.27	.23	.21	.25
Total operating expenses	$ 2.48	$ 2.45	$ 2.46	$ 2.50	$ 2.61	$ 2.46
Total cash costs	$ 8.49	$ 7.67	$ 7.90	$ 8.62	$ 7.66	$ 7.77
Other costs						
Depreciation[b]	$ .81	$ .92	$ 1.11	$ .75	$ .91	$ 1.11
Labor	1.76	1.96	1.84	1.45	1.57	1.49
Interest charge on all capital	1.36	1.35	1.43	1.39	1.38	1.51
Total other costs	$ 3.93	$ 4.23	$ 4.38	$ 3.59	$ 3.86	$ 4.11
Total nonfeed costs	$ 6.41	$ 6.68	$ 6.84	$ 6.09	$ 6.47	$ 6.57
Total all costs	$ 12.42	$ 11.90	$ 12.28	$ 12.21	$ 11.52	$ 11.88
Return above all costs	$ −.56	$ .18	$ −.47	$ −.17	$ .77	$ −.11

[a] Includes utilities, machinery, equipment and building repairs, machine hire, and fuel.
[b] Includes machinery, equipment, and building depreciation.

1986 through 1988. The residual costs, amounting to 87 percent of the total enterprise costs, were then considered as the net cost of producing milk.

The most significant differences between the herds containing 40 to 79 cows and those containing 80 or more cows for the period from 1986 through 1988 were the averages for pounds of milk produced per cow and labor costs per 100 pounds of milk produced. The large herds produced a 3-year average of 268 more pounds of milk per cow, and their labor cost per 100 pounds of milk produced in this 3-year period was an average of 35 cents lower.

In 1988, feed costs per 100 pounds of milk produced increased 15 percent for the small dairy herds and 21 percent for the large herds. This increase in feed costs reflects the higher 1988 prices for grain, protein supplement, and roughages. The cost of feed averaged about 50 percent of total production costs in Illinois dairy enterprises. Total nonfeed costs continued to decline by 4 and 6 percent, respectively, for the small and large dairy herds when compared with costs in 1987. Lower depreciation and labor costs were primarily responsible for reduced nonfeed costs. The total cost of producing 100 pounds of milk in 1988 was $12.42 for the small herds and $12.21 for the large herds. The average price received for milk in 1988 decreased by 2 percent for both groups of dairy enterprises. This resulted in negative returns above total production costs of 56 and 17 cents, respectively, for both the small and large enterprise groups in 1988. The returns above all costs for the large-herd group each year have averaged 44 cents per 100 pounds of milk produced more than the returns for the small-herd group from 1986 through 1988. This amounts to $7,556 more in returns per farm per year for herds in the large size group. Like most livestock farmers, the dairy farmers who have large amounts of unpaid family labor and who use small amounts of borrowed money are in the best position to withstand long periods of negative or lower profit margins.

Beef-cow herds

The minimum size for a beef-cow herd included in Table 17 was 10 cows. Farms combining cow herds and purchased feeder cattle were not included. In addition to all farms, Table 17 gives an analysis of cow herds in which calves were sold at weaning time and compares them with cow herds in which calves were finished to slaughter weights. From 1956 through 1969, the average size of the herd on all farms ranged from 25 to 30 cows. From 1969 to 1973, the average grew to about 40 cows per herd and remained stable through 1979. From 1980 to 1982, the herd size increased to about 44 cows, but in 1983, it dropped back to about 40 cows and has remained there, showing a slight increase in 1988. Most Illinois farmers who maintain a beef-cow herd do so as a supplemental enterprise to market nonsalable feeds and labor.

The return per $100 of feed fed to beef-cow herds averaged $150 in 1988. The return for the 5-year period from 1984 through 1988 averaged $130,

Table 17. Beef-Cow Enterprises, 1988 Averages per Farm

	All farms	Calves sold	Calves fed out
Number of farms	286	125	135
Number of cows in herd	41	41	42
Animal units in herd	64	57	74
Total pounds produced	32,769	25,354	40,423
Beef per cow in herd, pound	799	618	962
Total returns	$23,844	$18,887	$29,087
Value of feed fed	$15,799	$12,440	$19,208
Returns per $100 of feed fed	$ 150	$ 151	$ 151
Returns above feed per cow	$ 196	$ 157	$ 235
Death loss, pound	1,378	1,144	1,649
Percent of pounds produced	4.2	4.5	4.0
Price received per 100 pounds sold	$ 68.01	$ 71.30	$ 66.04
	per 100 pounds produced		
Feed cost	$ 48.21	$ 49.06	$ 47.51
Grain, pound	259	108	341
Protein and minerals, pound	35	31	36
Total concentrates, pound	294	139	377
Hay and dry roughage, pound	769	962	648
Corn silage, pound	366	378	395
Other silage, pound	48	86	34
Pasture days	25	29	22
Pasture days per animal unit	128	132	120
Hay equivalent per cow, tons	6.0	5.7	6.3

Table 18. Sheep Enterprises, 1988 Averages per Farm

	Native flocks
Number of farms	46
Wool and mutton produced, pound	6,213
Total returns	$3,746
Value of feed fed	$3,257
Returns per $100 of feed fed	$ 115
Percent lamb crop	127
Death loss, pound	559
Percent of pounds produced	9.0
	per 100 pounds produced
Price received	$71.70
Feed cost	$52.42
Concentrates, pound	376
Hay, pound	708
Corn silage, pound	...
Pasture days	13
Hay equivalent, pound	1,037

which is just above the 15-year average of $123 for the period from 1974 through 1988 (Table 9). Beef prices received in 1988 averaged $68.01 per hundredweight, an increase of $5.69 over beef prices in 1987. Feed costs per 100 pounds of beef produced increased by almost $8.00 to $48.21 in 1988.

Since 1984, the return above feed cost per cow for the average farmer to feed out calves rather than to sell them at weaning has been about $29 per cow. Additional returns are needed for the added costs of labor, buildings, and the capital required to feed out the calves. In 1988, return above feed cost for feeding calves to market weight was $78 more per cow than for selling calves.

Sheep enterprises

Sheep production is a minor enterprise on Illinois recordkeeping farms. The minimum size of enterprise in Table 18 is 3 animal units. One animal unit of sheep is defined as 750 pounds, liveweight. The return per $100 of feed fed in 1988 was $115 for native flocks. The pounds of wool and mutton produced per farm have remained fairly constant for the past 10 years. The price received for sheep increased from $67.22 per hundredweight in 1987 to $71.70 in 1988, while feed costs per hundredweight produced increased from $43.98 to $52.42, resulting in significantly lower returns. Most Illinois farmers who keep sheep do so as a supplemental enterprise in order to market nonsalable feeds and labor.

Costs, returns, financial summaries, investments, land use, and crop yields for different sizes and types of Illinois farms are reported in Tables 19 to 27a.

Table 19. 1988 Average Return, Costs, and Financial Summary by Size and Management Returns for Northern and Central Illinois Grain Farms with Soil Ratings from 86 to 100

Range in size (total acres)	180-339	340-799	800-1199	Over 1199	Your farm	All farms	340-799	
Management returns							Low 25%	High 25%
Number of farms	86	507	184	66		843	127	127
Total acres in farm	279	550	950	1583		691	562	579
Acres of tillable land	267	529	916	1458		660	538	561
Soil rating on tillable land	93	92	92	92		92	92	93
Total months labor	11.4	13.5	17.6	27.2		15.3	13.8	13.4
Months of hired labor	0.4	1.6	4.7	10.5		2.9	1.9	1.4
Beef produced, hundredweight	1	2	1	3		2	2	2
Pork produced, hundredweight	0	0	0	0		0	0	0
Dairy cows, number	0	0	0	0		0	0	0
Dollar returns per farm								
Crop returns	67824	135610	233292	388982		169852	113534	172348
Livestock returns above feed	116	86	44	168		86	123	149
Custom work	1027	1576	2582	7593		2211	1720	2236
Other farm receipts	1472	3091	4984	7006		3646	2894	4535
Value of farm production	70439	140363	240902	403750		175795	118271	179266
Dollar costs per farm								
Crop expenses	17916	36622	61451	101751		45232	39945	35957
Power and equipment	13434	25423	45012	68591		31855	28186	25444
Building and fence	3671	6193	9972	12962		7291	7771	5687
Labor	14257	16492	22575	35060		19046	16855	16743
Livestock services & supplies	70	103	239	241		140	104	82
Taxes	6141	11431	19085	30043		14019	11572	11984
Insurance and miscellaneous	2473	4333	7246	10689		5277	4754	4462
Interest on nonland capital	6666	12429	21889	35590		15719	13268	12926
Land charge or net rent	25570	49697	85481	137039		61884	51112	52084
Total nonfeed cost	90199	162722	272946	431962		200461	173565	165370
Capital account adjustment	419	771	1061	2475		932	445	993
Management returns	-19341	-21588	-30983	-25739		-23734	-54850	14890
Farm production per $1.00 of nonfeed costs	0.78	0.86	0.88	0.93		0.88	0.68	1.08
Farm production per man	73875	124836	164480	177808		138317	103210	160490
Financial summary								
Cash operating income	89098	170875	301684	463844		214021	164437	193627
Inventory change	-6594	-6643	-11559	-3598		-7472	-21100	6898
Accts. receivable (net change)	-5924	-12352	-22118	-35441		-15636	-13500	-9920
Farm products used	84	281	394	858		331	210	377
Less purchased feed	6171	11725	27195	21473		15298	11680	11657
Less purchased livestock	51	72	303	440		149	95	58
Adjusted gross farm income	70439	140363	240902	403750		175795	118271	179266
Cash operating expense	37067	72792	126653	211483		91762	76839	74637
Prepaid expense(-if increased)	154	-970	-2900	-10166		-1997	613	-2266
Accts. payable (+if increased)	52	64	12	-759		-12	-174	27
Farm-produced inputs	77	260	357	835		307	194	347
Total operating expense	37349	72144	124121	201391		90059	77472	72745
Income before depreciation	33090	68216	116782	202360		85736	40799	106523
Less depreciation	6857	13585	25392	37017		17310	16950	12660
Capital account adjustment	419	771	1061	2475		932	445	993
Net farm income *	26652	55403	92452	167818		69357	24294	94857
(operator's share) *	(9951)	(19221)	(22628)	(47245)	( )	(21213)	(723)	(42938)
Labor & mgt. income per operator	-5860	-6842	-15090	-7889		-8624	-39880	29429
Rate earned on investment, %	2.22	3.60	3.94	4.71		3.84	0.82	6.75

Note: Variations in totals are due to rounding to the nearest dollar. Farms with soil ratings from 86 to 100 are those with nearly level, well-drained prairie soils.
*Interest expense deducted from operator's share only.

Table 19a. 1988 Average Operating Costs, Investments, and Land Use by Size and Management Returns for Northern and Central Illinois Grain Farms with Soil Ratings from 86 to 100

Range in size (total acres)	180-339	340-799	800-1199	Over 1199	Your farm	All farms	340-799 Low 25%	340-799 High 25%
Management returns								
Number of farms	86	507	184	66		843	127	127
Selected cost and return items per tillable acre								
Soil fertility	32.73	33.12	32.06	33.98		32.93	35.45	31.05
Pesticides	18.73	20.68	20.60	20.63		20.57	22.48	18.77
Seed and other crop	15.73	15.39	14.42	15.16		15.07	16.27	14.27
*Crop total	* 67.19	* 69.19	* 67.09	* 69.77		* 68.57	* 74.21	* 64.09
Auto and utilities	5.20	3.94	2.97	2.33		3.42	4.13	3.93
Machinery repairs, supplies	13.46	12.29	12.03	11.38		12.10	12.44	11.92
Machinery hire	5.24	3.96	4.41	4.37		4.22	3.94	3.51
Fuel and oil	7.98	7.79	7.77	7.78		7.79	7.73	7.96
Machinery depreciation	18.50	20.05	21.96	21.17		20.76	24.14	18.04
*Power and equipment total	* 50.38	* 48.03	* 49.14	* 47.04		* 48.29	* 52.36	* 45.35
Drying and storage	4.43	4.81	4.11	3.85		4.41	5.29	4.52
Building repair	2.14	1.29	1.04	0.90		1.18	1.81	1.09
Building depreciation	7.20	5.61	5.73	4.14		5.46	7.34	4.53
*Building total	* 13.77	* 11.70	* 10.89	* 8.89		* 11.05	* 14.44	* 10.14
Labor, unpaid	51.59	28.09	17.54	14.35		23.48	27.43	26.66
Labor, hired	1.87	3.07	7.11	9.69		5.39	3.88	3.19
*Labor total	* 53.47	* 31.16	* 24.65	* 24.04		* 28.87	* 31.31	* 29.84
Value of feed fed	0.04	0.07	0.07	0.06		0.07	0.08	0.07
Capital purchases	14.24	19.66	19.93	21.99		19.92	23.73	15.81
Operator interest paid	14.17	15.69	20.47	18.57		17.57	12.56	18.07
Crop returns	254.36	256.22	254.68	266.74		257.50	210.93	307.20
Livestock return above feed	0.44	0.16	0.05	0.12		0.13	0.23	0.27
Value of farm production	264.16	265.21	262.99	276.87		266.51	219.73	319.53
Total nonfeed cost	338.27	307.45	297.97	296.22		303.90	322.46	294.76
Management returns	-72.54	-40.79	-33.82	-17.65		-35.98	-101.90	26.54
Farm investment								
Livestock inventory	202	227	387	573		287	241	319
Grain inventory	48551	94467	161170	288596		119541	86454	113489
Remaining cost in								
machinery and auto	7873	17004	34970	57344		23152	21927	14893
buildings and fence	13931	18996	31326	30578		22077	25415	13480
soil fertility	24	43	106	71		57	106	39
Value of land (current)	511411	993945	1709613	2740789		1237689	1022252	1041694
Total farm investment	581995	1124682	1937570	3117954		1402803	1156397	1183915
Total investment per acre	2084	2045	2039	1970		2031	2059	2044
Machinery investment per tillable acre	30	32	38	39		35	41	27
Percent tillable land in								
Corn and corn silage	43.4	43.1	43.8	45.2		43.7	44.3	41.4
Soybeans	41.3	42.9	43.0	40.4		42.5	42.5	42.9
Wheat	0.3	0.6	0.1	0.2		0.4	0.3	0.9
Other small grain	0.0	0.2	0.1	0.0		0.1	0.1	0.3
Diverted acres	12.9	12.3	12.0	12.6		12.3	12.5	12.4
All hay and pasture	0.3	0.2	0.2	0.0		0.2	0.3	0.2
Crop yields, bushels per acre								
Corn	85	86	83	86		85	71	100
Soybeans	30	30	30	32		30	25	34
Wheat	49	63	67	61		63	48	66

Note: Variations in totals are due to rounding to the nearest dollar. Farms with soil ratings from 86 to 100 are those with nearly level, well-drained prairie soils.
*Figures marked with an asterisk are subtotals.

Table 20. 1988 Average Return, Costs, and Financial Summary by Size and Management Returns for Northern and Central Illinois Grain Farms with Soil Ratings from 56 to 85

Range in size (total acres)	180-339	340-799	800-1199	Over 1199	Your farm	All farms	340-799	
Management returns							Low 25%	High 25%
Number of farms	57	302	120	63		542	76	76
Total acres in farm	260	575	948	1582		741	608	577
Acres of tillable land	242	541	887	1501		698	569	549
Soil rating on tillable land	76	77	76	76		77	78	77
Total months labor	11.8	13.1	16.6	23.1		14.9	13.5	13.1
Months of hired labor	0.3	1.3	3.3	7.4		2.4	1.6	1.0
Beef produced, hundredweight	1	1	4	1		2	1	2
Pork produced, hundredweight	0	0	1	0		0	0	0
Dairy cows, number	0	0	0	0		0	0	0
Dollar returns per farm								
Crop returns	53887	120953	196928	344694		156728	109381	151294
Livestock returns above feed	13	189	472	210		236	94	396
Custom work	579	1867	2252	8126		2544	1221	2352
Other farm receipts	872	3343	4623	12961		4485	3118	3450
Value of farm production	55352	126351	204273	365992		163992	113814	157493
Dollar costs per farm								
Crop expenses	15781	35637	58415	99747		46044	40831	34022
Power and equipment	13427	24838	40408	68789		32194	29466	24580
Building and fence	3935	6390	9093	15524		7792	7924	6522
Labor	14674	16284	20617	29398		18599	16856	16055
Livestock services & supplies	80	134	185	216		149	135	142
Taxes	4182	9531	15408	25283		12100	10601	9035
Insurance and miscellaneous	2408	4449	6282	9805		5263	5496	4435
Interest on nonland capital	5855	11865	19042	33801		15372	13640	11898
Land charge or net rent	18956	42686	67631	114584		54070	46501	42635
Total nonfeed cost	79297	151811	237079	397146		191580	171450	149324
Capital account adjustment	532	1541	1225	601		1256	853	2899
Management returns	-23412	-23918	-31580	-30553		-26332	-56782	11067
Farm production per $1.00 of nonfeed costs	0.70	0.83	0.86	0.92		0.86	0.66	1.05
Farm production per man	56249	115622	148002	190440		132107	101090	144675
Financial summary								
Cash operating income	76375	168027	261514	478278		215149	169774	179675
Inventory change	-8844	-17586	-20643	-24315		-18126	-29954	-273
Accts. receivable (net change)	-5251	-6834	-11363	-28817		-10225	-7276	-5048
Farm products used	80	263	334	795		321	360	252
Less purchased feed	6982	17361	25165	59928		22945	18677	16933
Less purchased livestock	24	155	402	22		180	410	179
Adjusted gross farm income	55352	126351	204273	365992		163992	113814	157493
Cash operating expense	33039	70810	111470	193403		90090	78558	70250
Prepaid expense(-if increased)	-296	-1939	-185	-798		-1245	-413	-3754
Accts. payable (+if increased)	53	58	-161	234		29	260	-17
Farm-produced inputs	70	249	318	795		309	360	213
Total operating expense	32866	69177	111440	193633		89182	78763	66689
Income before depreciation	22487	57176	92836	172361		74812	35051	90804
Less depreciation	7202	13367	22405	35547		17298	17710	12992
Capital account adjustment	532	1541	1225	601		1256	853	2899
Net farm income *	15817	45351	71656	137415		58770	18194	80710
(operator's share) *	(5808)	(13646)	(17541)	(34217)	( )	(16075)	(-4128)	(35916)
Labor & mgt. income per operator	-8862	-9440	-14913	-11617		-10844	-41661	25525
Rate earned on investment, %	0.32	3.15	3.57	4.46		3.48	0.32	6.72

Note: Variations in totals are due to rounding to the nearest dollar. Farms with soil ratings from 56 to 85 are those with poorly drained, heavy-till, and timber soils.
*Interest expense deducted from operator's share only.

Table 20a. 1988 Average Operating Costs, Investments, and Land Use by Size and Management Returns for Northern and Central Illinois Grain Farms with Soil Ratings from 56 to 85

Range in size (total acres)	180-339	340-799	800-1199	Over 1199	Your farm	All farms	340-799 Low 25%	340-799 High 25%
Management returns								
Number of farms	57	302	120	63		542	76	76
Selected cost and return items per tillable acre								
Soil fertility	30.78	32.23	32.49	34.39		32.79	35.26	29.08
Pesticides	19.44	18.71	18.78	17.76		18.52	20.21	18.35
Seed and other crop	14.98	14.92	14.63	14.32		14.69	16.26	14.58
Crop total	* 65.20	* 65.86	* 65.89	* 66.47		* 66.00	* 71.74	* 62.02
Auto and utilities	7.65	4.25	3.74	2.72		3.85	4.57	4.20
Machinery repairs, supplies	12.55	10.92	10.37	11.77		11.04	12.24	10.59
Machinery hire	5.97	4.94	4.21	4.66		4.70	4.47	5.51
Fuel and oil	8.76	7.51	7.40	8.08		7.67	7.83	7.68
Machinery depreciation	20.55	18.28	19.86	18.61		18.89	22.66	16.83
Power and equipment total	* 55.48	* 45.90	* 45.58	* 45.84		* 46.14	* 51.77	* 44.81
Drying and storage	4.65	4.09	3.63	4.36		4.05	3.70	3.88
Building repair	2.40	1.37	1.27	0.91		1.26	1.96	1.20
Building depreciation	9.21	6.35	5.36	5.07		5.86	8.25	6.81
Building total	* 16.26	* 11.81	* 10.26	* 10.34		* 11.17	* 13.92	* 11.89
Labor, unpaid	59.58	27.20	18.68	13.05		22.45	26.07	27.54
Labor, hired	1.05	2.89	4.57	6.54		4.21	3.55	1.72
Labor total	* 60.63	* 30.09	* 23.26	* 19.59		* 26.66	* 29.62	* 29.27
Value of feed fed	0.07	0.07	0.07	0.03		0.06	0.04	0.11
Capital purchases	22.07	15.48	19.81	16.86		17.28	18.10	15.82
Operator interest paid	14.42	17.78	17.31	17.86		17.55	18.10	19.83
Crop returns	222.66	223.53	222.12	229.69		224.64	192.18	275.79
Livestock return above feed	0.05	0.35	0.53	0.14		0.34	0.17	0.72
Value of farm production	228.71	233.51	230.41	243.88		235.05	199.96	287.08
Total nonfeed cost	327.65	280.56	267.41	264.64		274.60	301.23	272.20
Management returns	-96.74	-44.20	-35.62	-20.36		-37.74	-99.76	20.17
Farm investment								
Livestock inventory	140	271	168	223		229	641	176
Grain inventory	36012	82636	133688	257185		109325	79464	87191
Remaining cost in								
machinery and auto	9289	16718	32378	53612		23693	23485	13453
buildings and fence	13249	20351	25539	38075		22813	28656	22104
soil fertility	0	97	206	37		104	292	64
Value of land (current)	379123	853720	1352628	2291680		1081410	930021	852699
Total farm investment	437814	973789	1544609	2640815		1237572	1062562	975690
Total investment per acre	1684	1695	1630	1669		1669	1747	1691
Machinery investment per tillable acre	38	31	37	36		34	41	25
Percent tillable land in								
Corn and corn silage	50.6	44.7	43.9	45.8		45.0	44.4	44.0
Soybeans	33.5	38.3	38.4	35.0		37.3	39.2	38.5
Wheat	1.0	1.1	1.6	1.6		1.4	0.8	0.9
Other small grain	0.1	0.2	0.2	0.1		0.2	0.3	0.1
Diverted acres	14.3	14.0	13.6	14.1		13.9	13.7	14.0
All hay and pasture	0.2	0.3	0.7	0.2		0.4	0.4	0.4
Crop yields, bushels per acre								
Corn	63	60	64	66		63	51	74
Soybeans	23	23	24	27		24	20	28
Wheat	68	49	48	49		49	53	55

Note: Variations in totals are due to rounding to the nearest dollar. Farms with soil ratings from 56 to 85 are those with poorly drained, heavy-till, and timber soils.
*Interest expense deducted from operator's share only.

Table 21. 1988 Average Return, Costs, and Financial Summary by Size and Months of Labor for Northern and Central Illinois Hog Farms with Soil Ratings from 86 to 100

Range in size (total acres)	60-259	260-499	500-799	Over 799	Your farm	All farms	Labor	
							21-27 Mo.	31-39 Mo.
Number of farms	27	74	64	45		210	47	28
Total acres in farm	193	379	620	1127		589	632	821
Acres of tillable land	186	357	585	1055		554	593	773
Soil rating on tillable land	94	91	91	91		92	92	91
Total months labor	15.0	18.7	24.8	37.2		24.1	24.4	35.5
Months of hired labor	3.1	4.1	10.5	19.0		9.1	8.2	14.4
Beef produced, hundredweight	11	83	76	150		86	138	148
Pork produced, hundredweight	2431	2896	5267	6595		4351	4166	5956
Dairy cows, number	0	0	0	0		0	0	0
Dollar returns per farm								
Crop returns	44695	88187	159090	256767		140328	152329	198143
Livestock returns above feed	32911	36233	76142	104729		62646	58813	96111
Custom work	354	1301	2320	4123		2095	3985	1686
Other farm receipts	857	1782	5180	8530		4145	5470	6368
Value of farm production	78817	127503	242734	374150		209214	220598	302310
Dollar costs per farm								
Crop expenses	13385	24657	41355	70055		38025	40737	53577
Power and equipment	16952	32968	53241	78900		46930	47726	68246
Building and fence	10280	11471	21851	31541		18782	20118	27464
Labor	18342	22806	32800	52133		31563	31780	45219
Livestock services & supplies	4169	6239	10338	13462		8770	7702	13929
Taxes	4367	8284	14395	25154		13258	14184	19066
Insurance and miscellaneous	2965	4936	7807	11676		7002	7251	9324
Interest on nonland capital	11260	18880	33307	49263		28808	29208	41217
Land charge or net rent	17792	33659	54537	97056		51567	55027	71999
Total nonfeed cost	99511	163902	269631	429239		244703	253731	350042
Capital account adjustment	37	710	780	3010		1138	754	2329
Management returns	-20656	-35687	-26117	-52080		-34350	-32379	-45403
Farm production per $1.00 of nonfeed costs	0.79	0.78	0.90	0.87		0.85	0.87	0.86
Farm production per man	63038	81643	117474	120708		104346	108680	102313
Financial summary								
Cash operating income	145350	227582	393007	581569		343279	349571	483117
Inventory change	-11413	-14667	-10829	-24801		-15250	-9001	-18901
Accts. receivable (net change)	-2566	-8850	-13612	-25734		-13111	-13386	-20467
Farm products used	367	576	482	1373		691	855	1607
Less purchased feed	46227	65579	103723	138384		90317	86193	126408
Less purchased livestock	6692	11557	22592	19874		16077	21246	16637
Adjusted gross farm income	78817	127504	242734	374150		209214	220598	302310
Cash operating expense	42904	72269	129351	202015		113692	113222	164554
Prepaid expense(-if increased)	-278	-108	325	2448		549	1972	249
Accts. payable (+if increased)	-2	235	75	1372		399	96	1436
Farm-produced inputs	132	144	241	509		250	288	704
Total operating expense	42753	72538	129992	206345		114891	115578	166942
Income before depreciation	36064	54965	112742	167806		94323	105020	135367
Less depreciation	12780	20564	33914	53827		30759	33759	43544
Capital account adjustment	37	710	780	3010		1138	754	2329
Net farm income *	23321	35112	79608	116988		64701	72015	94152
(operator's share) *	(11605)	(7885)	(21946)	(31609)	( )	(17732)	(24273)	(23046)
Labor & mgt. income per operator	-5970	-16744	-8348	-30057		-15653	-12665	-20352
Rate earned on investment, %	1.83	1.98	4.40	3.93		3.54	3.78	3.72

Note: Variations in totals are due to rounding to the nearest dollar. Farms with soil ratings from 86 to 100 are those with nearly level, well-drained prairie soils.
*Interest expense deducted from operator's share only.

Table 21a. 1988 Average Operating Costs, Investments, and Land Use by Size and Months of Labor for Northern and Central Illinois Hog Farms with Soil Ratings from 86 to 100

Range in size (total acres)	60-259	260-499	500-799	Over 799	Your farm	All farms	Labor	
							21-27 Mo.	31-39 Mo.
Number of farms	27	74	64	45		210	47	28
Selected cost and return items per tillable acre								
Soil fertility	32.54	33.00	34.30	32.02		33.00	33.69	32.25
Pesticides	23.40	19.83	21.23	21.03		20.92	20.91	20.86
Seed and other crop	16.18	16.28	15.13	13.34		14.70	14.15	16.21
*Crop total	* 72.12	* 69.11	* 70.66	* 66.38		* 68.62	* 68.75	* 69.32
Auto and utilities	16.32	12.47	12.33	10.17		11.65	9.38	12.50
Machinery repairs, supplies	24.94	21.89	24.06	18.67		21.40	20.90	21.22
Machinery hire	10.92	10.61	9.95	4.52		7.92	5.31	9.28
Fuel and oil	11.48	12.12	11.42	10.44		11.18	10.39	12.05
Machinery depreciation	27.68	35.31	33.21	30.97		32.53	34.58	33.26
*Power and equipment total	* 91.34	* 92.40	* 90.97	* 74.76		* 84.69	* 80.55	* 88.30
Drying and storage	3.95	3.22	4.82	3.94		4.06	4.82	4.44
Building repair	10.26	6.61	7.78	5.91		6.86	6.74	8.01
Building depreciation	41.18	22.32	24.73	20.04		22.98	22.39	23.09
*Building total	* 55.39	* 32.15	* 37.33	* 29.89		* 33.90	* 33.95	* 35.54
Labor, unpaid	80.42	51.18	30.55	21.56		33.71	34.02	34.08
Labor, hired	18.41	12.74	25.49	27.84		23.25	19.61	24.43
*Labor total	* 98.83	* 63.92	* 56.04	* 49.40		* 56.96	* 53.63	* 58.51
Value of feed fed	339.68	237.22	237.34	170.21		214.32	198.20	206.38
Capital purchases	80.02	44.75	45.32	38.64		43.96	43.27	53.64
Operator interest paid	32.28	33.29	36.03	25.79		31.07	26.39	42.00
Crop returns	240.82	247.16	271.82	243.29		253.25	257.08	256.38
Livestock return above feed	177.33	101.55	130.09	99.23		113.06	99.26	124.36
Value of farm production	424.68	357.35	414.73	354.51		377.56	372.30	391.16
Total nonfeed cost	536.18	459.37	460.69	406.71		441.61	428.22	452.92
Management returns	-111.30	-100.02	-44.62	-49.35		-61.99	-54.65	-58.75
Farm investment								
Livestock inventory	39326	59713	99058	126998		83501	86538	115228
Grain inventory	30581	58929	108677	166388		93472	88123	135031
Remaining cost in								
machinery and auto	9856	21627	39663	66762		35282	38068	52163
buildings and fence	24111	36827	65232	95566		56436	58415	80606
soil fertility	0	0	286	346		161	463	84
Value of land (current)	355840	673193	1090745	1941121		1031344	1100536	1439988
Total farm investment	459714	850291	1403662	2397182		1300197	1372144	1823102
Total investment per acre	2386	2246	2264	2126		2208	2170	2222
Machinery investment per tillable acre	53	61	68	63		64	64	67
Percent tillable land in								
Corn and corn silage	52.3	50.2	51.8	49.5		50.5	51.2	48.1
Soybeans	33.3	30.7	30.8	32.9		31.7	32.6	34.6
Wheat	0.1	0.6	0.8	1.2		0.9	0.7	1.7
Other small grain	1.3	1.1	0.4	0.1		0.5	0.5	0.3
Diverted acres	10.6	12.5	13.4	13.5		13.1	11.8	13.2
All hay and pasture	2.5	3.2	0.8	1.0		1.5	2.0	1.4
Crop yields, bushels per acre								
Corn	76	70	80	73		75	76	82
Soybeans	30	30	35	31		32	33	33
Wheat	72	56	68	67		66	71	64

Note: Variations in totals are due to rounding to the nearest dollar. Farms with soil ratings from 86 to 100 are those with nearly level, well-drained prairie soils.
*Figures marked with an asterisk are subtotals.

Table 22. 1988 Average Return, Costs, and Financial Summary by Size and Months of Labor for Northern and Central Illinois Hog Farms with Soil Ratings from 56 to 85

Range in size (total acres)	60-259	260-499	500-799	Over 799	Your farm	All farms	Labor	
							21-27 Mo.	31-39 Mo.
Number of farms	41	99	77	54		271	64	21
Total acres in farm	197	380	633	1165		581	646	844
Acres of tillable land	182	339	550	993		505	570	682
Soil rating on tillable land	74	76	75	75		75	76	76
Total months labor	15.1	17.0	24.1	34.0		22.1	24.6	35.4
Months of hired labor	2.5	3.5	9.7	14.7		7.3	8.1	17.5
Beef produced, hundredweight	67	165	257	509		245	358	429
Pork produced, hundredweight	2546	2892	4237	6319		3904	4315	5285
Dairy cows, number	0	0	1	0		0	1	0
Dollar returns per farm								
Crop returns	40602	79202	134277	233474		119751	141867	160073
Livestock returns above feed	36878	42633	63502	100765		59275	66057	83228
Custom work	418	1490	1076	3301		1571	1557	2704
Other farm receipts	2504	2524	4328	8879		4300	6825	6106
Value of farm production	80401	125849	203183	346420		184898	216306	252112
Dollar costs per farm								
Crop expenses	11735	22691	34575	63637		32569	37262	40565
Power and equipment	21570	30394	43546	72376		41162	49758	56962
Building and fence	8982	12968	17912	27496		16665	20808	25624
Labor	18621	21169	31085	48746		29096	30938	48077
Livestock services & supplies	4960	5969	7946	13201		7819	9556	12195
Taxes	3664	6167	10491	18245		9424	10950	12417
Insurance and miscellaneous	2927	3887	6762	11869		6149	6874	7111
Interest on nonland capital	13051	18746	30291	49505		27294	33496	39744
Land charge or net rent	13735	26408	41903	77559		39086	44498	52756
Total nonfeed cost	99245	148400	224511	382633		209263	244140	295450
Capital account adjustment	534	388	685	1133		643	1290	409
Management returns	-18309	-22162	-20643	-35080		-23722	-26543	-42928
Farm production per $1.00 of nonfeed costs	0.81	0.85	0.90	0.91		0.88	0.89	0.85
Farm production per man	63895	88930	101154	122159		100317	105529	85347
Financial summary								
Cash operating income	159010	216583	329125	591201		314497	362142	425452
Inventory change	-7004	-10857	-10269	-20496		-12027	-11960	311
Accts. receivable (net change)	-3325	-5195	-8883	-14751		-7864	-11389	-8968
Farm products used	381	628	392	835		565	845	976
Less purchased feed	57695	58745	85417	160933		86527	94042	131400
Less purchased livestock	10965	16565	21747	49438		23740	29267	34257
Adjusted gross farm income	80401	125849	203202	346420		184903	216329	252112
Cash operating expense	41596	65591	105246	183615		96745	110078	139452
Prepaid expense(-if increased)	638	275	32	520		310	-166	2744
Accts. payable (+if increased)	62	-64	49	-445		-88	5	-64
Farm-produced inputs	51	256	104	255		182	413	330
Total operating expense	42346	66056	105431	183943		97147	110329	142461
Income before depreciation	38055	59793	97771	162477		87756	106000	109351
Less depreciation	14336	20308	28845	47414		27231	35254	38049
Capital account adjustment	534	388	685	1133		643	1290	409
Net farm income *	24253	39873	69611	116196		61168	72037	72012
(operator's share) *	(10455)	(15897)	(25070)	(36652)	( )	(21815)	(30797)	(21221)
Labor & mgt. income per operator	-3869	-5850	-5292	-17214		-7656	-7720	-24882
Rate earned on investment, %	2.15	3.27	4.58	4.59		4.12	4.25	3.47

Note: Variations in totals are due to rounding to the nearest dollar. Farms with soil ratings from 56 to 85 are those with poorly drained, heavy-till, and timber soils.
*Interest expense deducted from operator's share only.

Table 22a. 1988 Average Operating Costs, Investments, and Land Use by Size and Months of Labor for Northern and Central Illinois Hog Farms with Soil Ratings from 56 to 85

Range in size (total acres)	60-259	260-499	500-799	Over 799	Your farm	All farms	Labor	
							21-27 Mo.	31-39 Mo.
Number of farms	41	99	77	54		271	64	21
Selected cost and return items per tillable acre								
Soil fertility	29.67	32.93	30.40	30.27		30.93	30.56	27.80
Pesticides	18.60	18.70	17.90	18.41		18.33	19.53	17.02
Seed and other crop	16.35	15.35	14.55	15.43		15.19	15.27	14.68
Crop total	* 64.63	* 66.98	* 62.85	* 64.11		* 64.45	* 65.37	* 59.50
Auto and utilities	20.55	11.68	11.12	9.54		11.15	11.54	12.07
Machinery repairs, supplies	29.00	21.15	20.60	18.25		20.27	20.44	24.24
Machinery hire	10.49	10.00	5.44	4.96		6.65	6.68	4.50
Fuel and oil	17.24	11.72	11.91	10.73		11.69	12.00	12.66
Machinery depreciation	41.50	35.18	30.09	29.43		31.70	36.63	30.08
Power and equipment total	* 118.79	* 89.71	* 79.16	* 72.92		* 81.45	* 87.29	* 83.55
Drying and storage	2.82	4.06	4.22	2.86		3.57	3.69	3.53
Building repair	9.20	9.51	6.00	6.50		7.23	7.64	8.32
Building depreciation	37.45	24.71	22.34	18.34		22.17	25.17	25.73
Building total	* 49.47	* 38.28	* 32.56	* 27.70		* 32.98	* 36.50	* 37.58
Labor, unpaid	86.89	49.83	32.83	24.39		36.63	36.11	32.92
Labor, hired	15.66	12.66	23.68	24.72		20.95	18.16	37.60
Labor total	* 102.55	* 62.48	* 56.50	* 49.11		* 57.58	* 54.27	* 70.52
Value of feed fed	410.63	247.45	225.62	191.70		227.75	229.17	238.79
Capital purchases	56.17	44.87	44.80	38.37		42.92	51.17	53.81
Operator interest paid	31.75	27.52	36.42	24.28		29.24	25.73	24.17
Crop returns	223.60	233.78	244.08	235.22		236.98	248.87	234.79
Livestock return above feed	203.09	125.84	115.43	101.52		117.30	115.88	122.08
Value of farm production	442.77	371.47	369.34	349.01		365.90	379.45	369.80
Total nonfeed cost	546.55	438.03	408.11	385.50		414.11	428.28	433.36
Management returns	-100.83	-65.42	-37.53	-35.34		-46.95	-46.56	-62.97
Farm investment								
Livestock inventory	50897	64869	97352	160903		91121	110952	126779
Grain inventory	25170	50454	91316	141708		76422	92113	106987
Remaining cost in								
machinery and auto	13036	21454	35287	60827		31957	43460	43534
buildings and fence	31242	38553	64572	87734		54640	72553	95625
soil fertility	0	125	16	1		50	182	0
Value of land (current)	274693	528162	838070	1551179		781718	889957	1055126
Total farm investment	395038	703619	1126614	2002356		1035909	1209219	1428049
Total investment per acre	2004	1850	1781	1718		1784	1873	1692
Machinery investment per tillable acre	72	63	64	61		63	76	64
Percent tillable land in								
Corn and corn silage	59.5	53.5	52.0	50.2		52.1	52.6	50.6
Soybeans	19.7	22.3	27.2	28.9		26.2	25.0	30.5
Wheat	1.5	2.5	1.9	2.5		2.2	2.3	1.9
Other small grain	1.8	1.8	0.7	0.6		1.0	0.9	0.5
Diverted acres	11.4	14.8	14.1	14.5		14.3	15.2	14.4
All hay and pasture	3.9	4.8	4.0	2.6		3.6	3.4	2.1
Crop yields, bushels per acre								
Corn	56	61	67	66		64	69	72
Soybeans	26	27	29	30		29	31	30
Wheat	64	57	62	59		59	62	64

Note: Variations in totals are due to rounding to the nearest dollar. Farms with soil ratings from 56 to 85 are those with poorly drained, heavy-till, and timber soils.
*Figures marked with an asterisk are subtotals.

Table 23. 1988 Average Return, Costs, and Financial Summary by Size and Management Returns for Southern Illinois Grain Farms with Soil Ratings from 36 to 85

Range in size (total acres)	180-339	340-799	800-1199	Over 1199	Your farm	All farms	340-799	
Management returns							Low 25%	High 25%
Number of farms	33	257	163	130		583	64	64
Total acres in farm	271	582	966	1771	_____	937	582	603
Acres of tillable land	242	534	887	1619	_____	858	527	572
Soil rating on tillable land	57	60	59	59	_____	59	60	60
Total months labor	11.9	14.6	18.8	29.5	_____	18.9	14.8	14.8
Months of hired labor	0.4	2.1	4.8	11.8	_____	4.9	2.0	2.4
Beef produced, hundredweight	62	95	110	151		110	87	114
Pork produced, hundredweight	56	215	390	591		339	115	261
Dairy cows, number	0	0	0	0		0	0	0
Dollar returns per farm								
Crop returns	59786	123206	204595	395945	_____	203188	100014	154233
Livestock returns above feed	1846	5108	8449	11247	_____	7226	3241	6666
Custom work	704	1084	1598	3697	_____	1789	894	1917
Other farm receipts	695	1964	2603	6450	_____	3071	1048	2054
Value of farm production	63031	131361	217245	417338	_____	215274	105197	164870
Dollar costs per farm								
Crop expenses	13665	30634	52581	99486	_____	51163	33017	29051
Power and equipment	16657	26604	44085	80887	_____	43033	30666	25606
Building and fence	2372	4425	6408	11937	_____	6538	4245	4757
Labor	14757	17904	22836	36861	_____	23332	18064	18039
Livestock services & supplies	234	534	1073	1359	_____	851	560	568
Taxes	2575	5023	7874	14539	_____	7804	5386	5085
Insurance and miscellaneous	1815	3418	5620	8834	_____	5151	3598	3622
Interest on nonland capital	6039	10635	17038	32815	_____	17111	10763	11494
Land charge or net rent	12295	28016	45474	81949	_____	44033	27770	29327
Total nonfeed cost	70408	127191	202986	368663	_____	199013	134070	127551
Capital account adjustment	-211	776	923	2472	_____	1139	1155	882
Management returns	-7588	4947	15183	51147	_____	17401	-27716	38202
Farm production per $1.00 of nonfeed costs	0.90	1.03	1.07	1.13	_____	1.08	0.78	1.29
Farm production per man	63415	107994	138889	169920	_____	136469	85458	133948
Financial summary								
Cash operating income	64119	143200	231675	441722	_____	230026	124369	168706
Inventory change	3156	2768	9996	21650	_____	9021	-7106	14391
Accts. receivable (net change)	-694	-1486	-4500	-4654	_____	-2990	-2127	-560
Farm products used	393	828	1417	2402	_____	1319	872	627
Less purchased feed	1816	8611	16048	36641	_____	16556	7015	9274
Less purchased livestock	2125	5336	5294	7140	_____	5544	3793	9017
Adjusted gross farm income	63031	131362	217245	417338	_____	215274	105197	164871
Cash operating expense	29233	61042	101854	194134	_____	100330	63575	61656
Prepaid expense(-if increased)	-366	-1493	-570	-3271	_____	-1568	-659	-2313
Accts. payable (+if increased)	23	-11	-32	125	_____	15	0	0
Farm-produced inputs	291	673	1230	2061	_____	1116	693	438
Total operating expense	29180	60209	102480	193048	_____	99892	63608	59780
Income before depreciation	33851	71156	114768	224290	_____	115384	41589	105091
Less depreciation	8519	12652	20574	38737	_____	20450	15932	11510
Capital account adjustment	-211	776	923	2472	_____	1139	1155	882
Net farm income *	25120	59281	95119	188026	_____	96075	26812	94463
(operator's share) *	(11672)	(27750)	(40392)	(75567)	(_____)	(41037)	(5116)	(50240)
Labor & mgt. income per operator	6293	19482	30262	59296	_____	30627	-13156	52782
Rate earned on investment, %	3.52	6.56	7.25	8.49	_____	7.51	1.66	11.20

Note: Variations in totals are due to rounding to the nearest dollar.

*Interest expense deducted from operator's share only.

Table 23a. 1988 Average Operating Costs, Investments, and Land Use by Size and Management Returns for Southern Illinois Grain Farms with Soil Ratings from 36 to 85

Range in size (total acres)	180-339	340-799	800-1199	Over 1199	Your farm	All farms	340-799 Low 25%	340-799 High 25%
Management returns								
Number of farms	33	257	163	130		583	64	64
Selected cost and return items per tillable acre								
Soil fertility	27.11	29.81	30.93	32.02		31.02	34.97	24.83
Pesticides	16.33	13.73	14.84	15.76		14.95	13.56	13.11
Seed and other crop	13.07	13.86	13.51	13.67		13.67	14.09	12.88
Crop total *	56.52	57.41	59.29	61.45		59.64	62.62	50.82
Auto and utilities	6.65	4.43	3.64	3.14		3.69	4.83	4.07
Machinery repairs, supplies	17.50	14.06	14.55	14.40		14.40	15.10	13.53
Machinery hire	4.38	3.83	3.88	4.05		3.95	3.68	3.94
Fuel and oil	9.92	8.92	8.66	8.83		8.82	9.52	8.71
Machinery depreciation	30.43	18.61	18.99	19.54		19.30	25.03	14.53
Power and equipment total *	68.89	49.85	49.71	49.96		50.16	58.16	44.79
Drying and storage	1.24	1.36	1.21	1.64		1.43	0.98	1.29
Building repair	3.76	1.90	1.81	1.41		1.70	2.13	1.43
Building depreciation	4.81	5.03	4.21	4.32		4.49	4.95	5.59
Building total *	9.81	8.29	7.23	7.37		7.62	8.05	8.32
Labor, unpaid	59.45	29.39	19.65	13.66		20.43	30.34	27.01
Labor, hired	1.58	4.16	6.10	9.11		6.76	3.92	4.55
Labor total *	61.03	33.55	25.75	22.77		27.20	34.26	31.55
Value of feed fed	16.60	18.44	17.39	13.63		16.08	14.89	20.29
Capital purchases	36.81	22.71	21.69	25.08		23.64	33.07	17.62
Operator interest paid	26.43	21.08	19.79	19.86		20.28	15.81	26.46
Crop returns	247.27	230.88	230.68	244.58		236.85	189.68	269.78
Livestock return above feed	7.64	9.57	9.53	6.95		8.42	6.15	11.66
Value of farm production	260.69	246.16	244.95	257.79		250.94	199.51	288.38
Total nonfeed cost	291.20	238.34	228.87	227.73		231.98	254.27	223.11
Management returns	-31.39	9.27	17.12	31.59		20.28	-52.57	66.82
Farm investment								
Livestock inventory	8133	13552	19102	25711		17508	11853	16224
Grain inventory	30503	61387	96867	192841		98871	47449	76745
Remaining cost in								
machinery and auto	16175	17964	30866	66822		32365	25138	14086
buildings and fence	4415	10878	14665	30584		15965	11954	12217
soil fertility	0	71	0	185		73	251	22
Value of land (current)	245902	560327	909484	1638985		880673	555407	586546
Total farm investment	305128	664182	1070987	1955133		1045458	652052	705840
Total investment per acre	1125	1141	1108	1104		1116	1121	1170
Machinery investment per tillable acre	67	34	35	41		38	48	25
Percent tillable land in								
Corn and corn silage	34.8	33.3	33.9	35.6		34.5	31.3	34.5
Soybeans	35.5	37.0	36.7	35.7		36.4	35.4	39.0
Wheat	9.6	12.9	12.6	11.9		12.3	15.9	10.7
Other small grain	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Diverted acres	14.1	12.2	13.2	12.6		12.7	12.8	10.2
All hay and pasture	5.3	2.9	2.2	2.4		2.5	3.0	3.3
Crop yields, bushels per acre								
Corn	96	87	89	93		90	74	99
Soybeans	29	27	28	30		28	23	31
Wheat	55	56	54	56		56	53	58

Note: Variations in totals are due to rounding to the nearest dollar.

*Figures marked with an asterisk are subtotals.

Table 24. 1988 Average Return, Costs, and Financial Summary by Size and Months of Labor for Southern Illinois Hog Farms with Soil Ratings from 36 to 85

Range in size (total acres)	60-259	260-499	500-799	Over 799	Your farm	All farms	Labor	
							21-27 Mo.	31-39 Mo.
Number of farms	26	57	55	52		190	45	14
Total acres in farm	189	376	648	1119		632	687	853
Acres of tillable land	166	329	581	1016		568	620	809
Soil rating on tillable land	61	61	60	60		60	60	64
Total months labor	18.6	15.7	23.2	32.1		22.8	23.9	34.0
Months of hired labor	4.6	2.8	8.1	14.1		7.7	7.6	13.8
Beef produced, hundredweight	21	74	72	310		131	139	252
Pork produced, hundredweight	2944	2644	4272	6036		4084	4733	5373
Dairy cows, number	0	0	2	2		1	0	7
Dollar returns per farm								
Crop returns	42000	76544	138365	251641		137634	155952	197000
Livestock returns above feed	45308	36031	57036	93164		59017	65920	96935
Custom work	413	549	1616	1684		1150	1468	5394
Other farm receipts	1274	1765	3222	4375		2834	3142	4710
Value of farm production	88995	114890	200239	350864		200635	226483	304039
Dollar costs per farm								
Crop expenses	9555	20451	35430	63999		35214	42018	49514
Power and equipment	21522	26797	51344	75643		46549	52094	69649
Building and fence	13337	8815	15575	22459		15125	17833	22018
Labor	23040	19788	28938	42606		29126	29954	42945
Livestock services & supplies	6177	4308	6981	11680		7355	8976	10536
Taxes	2320	3230	5797	9054		5442	6030	7198
Insurance and miscellaneous	2691	3474	5933	8312		5403	6318	8219
Interest on nonland capital	13996	14307	26838	41022		25203	27359	37071
Land charge or net rent	9177	18346	29853	54556		30332	32079	43156
Total nonfeed cost	101816	119515	206690	329330		199751	222662	290305
Capital account adjustment	567	152	330	2811		988	498	849
Management returns	-12252	-4472	-6119	24346		1873	4319	14582
Farm production per $1.00 of nonfeed costs	0.87	0.96	0.97	1.07		1.00	1.02	1.05
Farm production per man	57559	87912	103370	131125		105781	113726	107285
Financial summary								
Cash operating income	161021	175618	303961	500106		299580	336217	423235
Inventory change	-6394	-6145	-10951	6164		-4201	-4494	-262
Accts. receivable (net change)	76	-778	-1516	-3418		-1597	-2583	-2594
Farm products used	329	726	1151	1401		979	1058	1690
Less purchased feed	61510	46668	76965	127282		79532	85062	89330
Less purchased livestock	4526	7861	15438	26108		14592	18651	28698
Adjusted gross farm income	88995	114890	200239	350864		200635	226483	304039
Cash operating expense	43609	56238	99923	166834		97424	109892	140178
Prepaid expense(-if increased)	344	-419	-1339	-2381		-1118	-1004	826
Accts. payable (+if increased)	2	0	45	117		45	195	0
Farm-produced inputs	98	382	742	968		608	671	1028
Total operating expense	44052	56201	99371	165537		96958	109754	142032
Income before depreciation	44944	58689	100869	185328		103677	116729	162006
Less depreciation	17138	14608	31741	45667		28414	33039	42733
Capital account adjustment	567	152	330	2811		988	498	849
Net farm income *	28372	44233	69458	142473		76251	84188	120122
(operator's share) *	(16834)	(22560)	(31465)	(70698)	( )	(37529)	(43332)	(70088)
Labor & mgt. income per operator	2872	10216	8506	32564		14832	19621	18938
Rate earned on investment, %	3.45	5.61	5.96	8.09		6.79	7.10	7.76

Note: Variations in totals are due to rounding to the nearest dollar.

*Interest expense deducted from operator's share only.

Table 24a. 1988 Average Operating Costs, Investments, and Land Use by Size and Months of Labor for Southern Illinois Hog Farms with Soil Ratings from 36 to 85

Range in size (total acres)	60-259	260-499	500-799	Over 799	Your farm	All farms	Labor	
							21-27 Mo.	31-39 Mo.
Number of farms	26	57	55	52		190	45	14
Selected cost and return items per tillable acre								
Soil fertility	26.27	32.35	30.02	33.52		31.99	34.22	34.99
Pesticides	16.58	15.66	16.92	14.91		15.70	19.13	12.19
Seed and other crop	14.70	14.11	14.09	14.58		14.36	14.47	14.03
*Crop total	*57.55	*62.11	*61.02	*63.02		*62.05	*67.82	*61.20
Auto and utilities	25.36	13.15	11.69	8.69		11.02	12.39	10.51
Machinery repairs, supplies	32.06	23.04	22.71	20.89		22.25	22.07	25.41
Machinery hire	9.13	7.37	6.66	4.20		5.68	4.97	4.78
Fuel and oil	16.22	12.38	13.04	10.98		12.04	12.59	11.09
Machinery depreciation	46.86	25.45	34.32	29.72		31.03	32.07	34.30
*Power and equipment total	*129.62	*81.39	*88.43	*74.49		*82.02	*84.08	*86.09
Drying and storage	1.40	1.33	1.30	2.12		1.71	1.77	2.10
Building repair	22.56	6.57	5.18	4.88		5.97	5.77	6.61
Building depreciation	56.36	18.87	20.34	15.12		18.97	21.25	18.51
*Building total	*80.32	*26.77	*26.82	*22.12		*26.65	*28.78	*27.22
Labor, unpaid	105.11	48.76	32.53	22.20		33.20	32.97	31.29
Labor, hired	33.65	11.35	17.31	19.75		18.12	15.37	21.80
*Labor total	*138.76	*60.10	*49.84	*41.95		*51.32	*48.35	*53.08
Value of feed fed	502.75	226.85	204.11	178.34		207.41	214.07	192.84
Capital purchases	62.94	36.29	50.77	44.33		45.58	54.61	44.33
Operator interest paid	33.72	37.30	28.43	26.07		29.03	28.76	23.82
Crop returns	252.96	232.48	238.30	247.79		242.52	251.71	243.51
Livestock return above feed	272.87	109.44	98.23	91.74		103.99	106.40	119.82
Value of farm production	535.99	348.95	344.86	345.50		353.54	365.54	375.82
Total nonfeed cost	613.21	363.00	355.97	324.29		351.98	359.38	358.84
Management returns	-73.80	-13.59	-10.54	23.97		3.30	6.97	18.03
Farm investment								
Livestock inventory	55038	52951	86816	125899		83004	84792	116019
Grain inventory	32595	45992	77214	152756		82416	89851	137694
Remaining cost in								
machinery and auto	14227	14228	38362	67879		35897	39939	56101
buildings and fence	30875	22440	49056	44269		37273	41291	49535
soil fertility	0	69	9	315		109	81	13
Value of land (current)	183547	366923	597067	1091117		606651	641591	863122
Total farm investment	316282	502603	848525	1482236		845352	897546	1222483
Total investment per acre	1677	1337	1310	1324		1337	1307	1433
Machinery investment per tillable acre	86	43	66	67		63	64	69
Percent tillable land in								
Corn and corn silage	37.1	39.1	39.2	38.5		38.8	42.0	38.1
Soybeans	29.6	31.1	34.4	33.3		33.1	33.2	31.2
Wheat	13.1	12.4	10.8	10.8		11.2	10.3	12.0
Other small grain	0.2	0.0	0.0	0.0		0.0	0.0	0.0
Diverted acres	12.9	11.7	10.4	13.0		12.0	12.0	13.5
All hay and pasture	4.0	4.5	3.7	2.6		3.3	1.8	4.9
Crop yields, bushels per acre								
Corn	84	81	88	89		87	93	84
Soybeans	27	27	27	30		29	30	28
Wheat	57	57	56	59		58	59	57

Note: Variations in totals are due to rounding to the nearest dollar.

*Figures marked with an asterisk are subtotals.

Table 25. 1988 Average Return, Costs, and Financial Summary by Number of Cows in Herd for Illinois Dairy Farms

Area of state	Northern Illinois				Southern Illinois			
Number of cows in herd	10-39	40-79	Over 79	All farms	10-39	40-79	Over 79	All farms
Number of farms	23	97	33	153	8	49	47	104
Total acres in farm	265	349	556	381	405	378	578	471
Acres of tillable land	233	291	458	318	325	353	512	423
Soil rating on tillable land	79	72	73	73	60	60	59	60
Total months labor	16.5	20.5	34.2	22.8	19.4	22.7	31.4	26.4
Months of hired labor	3.7	5.0	12.6	6.4	2.8	8.6	12.2	9.8
Beef produced, hundredweight	538	472	712	534	202	376	737	526
Pork produced, hundredweight	125	108	289	150	78	4	173	86
Dairy cows, number	31	57	105	64	32	60	109	80
Dollar returns per farm								
Crop returns	54317	71240	113509	77813	72768	82843	126772	101920
Livestock returns above feed	36206	65651	126960	74448	24045	69599	120119	88926
Custom work	635	497	1370	706	366	466	864	638
Other farm receipts	1724	1962	3919	2349	3823	7372	11756	9080
Value of farm production	92883	139351	245760	155316	101001	160281	259511	200565
Dollar costs per farm								
Crop expenses	13533	18195	31209	20301	15367	21972	33138	26510
Power and equipment	22732	31553	57202	35759	23912	36960	58649	45758
Building and fence	5254	10032	22437	11989	3985	7083	12893	9471
Labor	21209	25768	41025	28373	25035	28024	39134	32815
Livestock services & supplies	7407	11033	20439	12517	3894	9200	18088	12809
Taxes	4733	5730	9569	6408	3309	3007	4951	3909
Insurance and miscellaneous	2977	3343	7824	4254	3190	3740	5966	4704
Interest on nonland capital	13573	20546	38082	23280	9341	18317	32028	23823
Land charge or net rent	18438	21100	32864	23237	17936	18587	26384	22061
Total nonfeed cost	109856	147300	260649	166119	105968	146890	231232	181858
Capital account adjustment	44	339	351	297	0	267	322	271
Management returns	-16928	-7609	-14538	-10505	-4966	13658	28600	18878
Farm production per $1.00 of nonfeed costs	0.85	0.95	0.94	0.93	0.95	1.09	1.12	1.10
Farm production per man	67569	81756	86277	81675	62314	84898	99216	91322
Financial summary								
Cash operating income	123056	186137	333877	208520	117576	189380	327259	246167
Inventory change	-270	-1946	3126	-600	2045	5813	3997	4703
Accts. receivable (net change)	-2689	-2523	-6245	-3350	49	-314	-543	-390
Farm products used	1607	1773	2570	1920	1630	1534	2493	1975
Less purchased feed	22905	34511	67371	39854	14455	28125	68931	45515
Less purchased livestock	5247	8589	18625	10251	5740	7489	4096	5821
Adjusted gross farm income	93549	140340	247331	156382	101105	160797	260178	201118
Cash operating expense	52155	67879	127631	78403	47135	73086	120181	92373
Prepaid expense(-if increased)	-135	292	906	360	-686	30	-1238	-598
Accts. payable (+if increased)	-450	213	285	129	-359	0	0	-27
Farm-produced inputs	693	1077	1619	1136	1065	937	1387	1150
Total operating expense	52261	69461	130440	80027	47153	74052	120328	92896
Income before depreciation	41289	70879	116891	76355	53953	86745	139849	108222
Less depreciation	10273	17859	33865	20171	10783	18861	29169	22898
Capital account adjustment	44	339	351	297	0	267	322	271
Net farm income *	31060	53359	83377	56481	43170	68151	111003	85595
(operator's share) *	(16654)	(26291)	(44591)	(28790)	(18601)	(48101)	(71541)	(56425)
Labor & mgt. income per operator	-1596	8899	5272	6539	9778	27924	35177	29806
Rate earned on investment, %	3.07	5.59	5.66	5.34	5.04	9.45	10.64	9.89

Note: Variations in totals are due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.
*Interest expense deducted from operator's share only.

Table 25a. 1988 Average Operating Costs, Investments, and Land Use by Number of Cows in Herd for Illinois Dairy Farms

Area of state	Northern Illinois				Southern Illinois			
Number of cows in herd	10-39	40-79	Over 79	All farms	10-39	40-79	Over 79	All farms
Number of farms	23	97	33	153	8	49	47	104
Selected cost and return items per tillable acre								
Soil fertility	27.12	30.63	35.80	31.85	26.89	34.92	34.41	34.16
Pesticides	15.46	14.88	15.31	15.08	9.47	12.95	14.32	13.49
Seed and other crop	15.55	16.99	17.07	16.86	10.96	14.36	16.02	15.07
Crop total	* 58.13	* 62.50	* 68.17	* 63.78	* 47.32	* 62.22	* 64.74	* 62.72
Auto and utilities	14.31	17.66	17.28	17.18	11.52	14.86	15.76	15.15
Machinery repairs, supplies	25.12	30.69	37.26	32.12	19.90	27.98	35.72	31.74
Machinery hire	15.16	7.95	12.75	10.23	4.86	8.72	8.46	8.35
Fuel and oil	14.74	14.92	15.53	15.09	11.59	14.07	15.50	14.70
Machinery depreciation	28.31	37.16	42.13	37.73	25.77	39.05	39.14	38.31
Power and equipment total	* 97.65	* 108.39	* 124.95	* 112.35	* 73.63	* 104.67	* 114.58	* 108.26
Drying and storage	1.73	2.70	3.83	2.95	0.71	0.68	1.00	0.86
Building repair	5.02	7.57	13.36	9.09	4.60	5.03	6.34	5.72
Building depreciation	15.82	24.19	31.82	25.63	6.95	14.35	17.85	15.83
Building total	* 22.57	* 34.46	* 49.01	* 37.67	* 12.27	* 20.06	* 25.19	* 22.41
Labor, unpaid	68.64	66.38	58.91	64.31	64.23	49.81	46.87	49.05
Labor, hired	22.47	22.14	30.70	24.83	12.86	29.55	29.59	28.58
Labor total	* 91.11	* 88.52	* 89.62	* 89.14	* 77.09	* 79.37	* 76.45	* 77.64
Value of feed fed	200.91	251.74	274.65	253.26	117.52	193.05	256.53	223.33
Capital purchases	39.99	45.32	75.52	54.10	18.00	44.22	57.77	50.08
Operator interest paid	24.03	48.33	43.04	44.02	42.02	25.86	39.85	34.47
Crop returns	233.34	244.72	247.95	244.47	224.07	234.61	247.66	241.13
Livestock return above feed	155.54	225.52	277.33	233.90	74.04	197.11	234.67	210.39
Value of farm production	399.01	478.68	536.84	487.96	311.01	453.92	506.98	474.52
Total nonfeed cost	471.92	505.99	569.37	521.90	326.31	416.00	451.74	430.26
Management returns	-72.72	-26.14	-31.76	-33.01	-15.30	38.68	55.87	44.90
Farm investment								
Livestock inventory	54823	72650	128869	82096	37590	71377	136501	98209
Grain inventory	34338	40979	69251	46078	29444	41507	70920	53871
Remaining cost in								
machinery and auto	10761	24036	45348	26637	9433	26617	45972	34042
buildings and fence	22686	48829	95974	55067	7538	23956	36627	28419
soil fertility	0	0	44	9	366	2	0	29
Value of land (current)	368753	421994	657277	464738	358729	371743	527685	441216
Total farm investment	491360	608488	996761	674626	443100	535201	817705	655786
Total investment per acre	1855	1744	1792	1771	1093	1414	1415	1393
Machinery investment per tillable acre	46	83	99	84	29	75	90	81
Percent tillable land in								
Corn and corn silage	48.2	47.9	47.2	47.7	29.7	31.9	35.4	33.7
Soybeans	14.8	7.6	8.6	8.7	32.9	22.7	22.5	23.2
Wheat	0.6	0.2	0.3	0.2	12.2	15.6	13.2	14.1
Other small grain	4.6	4.4	3.0	4.0	0.5	0.0	0.1	0.1
Diverted acres	10.5	11.4	12.5	11.7	11.4	9.8	9.1	9.5
All hay and pasture	21.6	27.9	28.6	27.5	12.8	19.7	20.1	19.5
Crop yields, bushels per acre								
Corn	58	60	70	63	67	74	75	74
Soybeans	20	23	24	23	23	25	27	26
Wheat	76	59	65	65	51	56	56	56

Note: Variations in totals are due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.
*Figures marked with an asterisk are subtotals.

Table 26. 1988 Average Return, Costs, and Financial Summary by Size and Months of Labor for Illinois Beef Cattle Farms

Area of state	Northern Illinois					Southern Illinois	
Range in size (total acres)	180-339	340-799	Over 799	All farms	Your farm	Labor 21-27 Mo.	Labor 31-39 Mo.	All farms
Number of farms	14	53	32	99		20	7	22
Total acres in farm	269	523	1133	684		781	944	583
Acres of tillable land	220	455	999	598		709	730	456
Soil rating on tillable land	77	78	80	78		80	78	55
Total months labor	13.1	17.7	28.4	20.5		24.1	34.9	21.3
Months of hired labor	0.7	5.3	12.5	7.0		10.4	13.8	6.0
Beef produced, hundredweight	1309	2265	3962	2678		2534	4010	1360
Pork produced, hundredweight	67	551	1327	733		993	1878	681
Dairy cows, number	0	0	0	0		0	0	0
Dollar returns per farm								
Crop returns	58825	118279	257932	155012		188335	192253	104908
Livestock returns above feed	30249	49119	94797	61215		65683	100294	37529
Custom work	589	1393	3801	2058		3043	3421	1208
Other farm receipts	1988	2113	4704	2933		2620	3951	1678
Value of farm production	91651	170906	361234	221218		259681	299919	145323
Dollar costs per farm								
Crop expenses	16162	31077	73531	42690		47568	54133	28389
Power and equipment	22535	39323	80288	50190		61491	65356	35944
Building and fence	8800	13957	23070	16173		23078	21796	5844
Labor	16606	22423	37818	26576		30666	43010	25827
Livestock services & supplies	3033	6064	14453	8347		7692	17165	6075
Taxes	4928	8967	19654	11850		13662	17047	4493
Insurance and miscellaneous	2769	4790	9134	5908		6538	8237	3389
Interest on nonland capital	18747	35970	66522	43410		49143	56048	21467
Land charge or net rent	18137	37212	80104	48379		56012	62561	22083
Total nonfeed cost	111717	199782	404574	253524		295848	345352	153512
Capital account adjustment	2073	-95	603	436		1931	23	766
Management returns	-17992	-28972	-42736	-31869		-34236	-45410	-7422
Farm production per $1.00 of nonfeed costs	0.82	0.86	0.89	0.87		0.88	0.87	0.95
Farm production per man	83635	116091	152450	129443		129141	102997	81785
Financial summary								
Cash operating income	230834	485330	978606	608783		627036	807160	242072
Inventory change	9178	4559	33533	14578		10235	89344	15443
Accts. receivable (net change)	-3005	-6437	-26988	-12594		-15382	-21795	-2136
Farm products used	398	995	2372	1356		2331	1589	1441
Less purchased feed	29608	56540	138081	79088		82023	114818	36274
Less purchased livestock	116146	257004	488212	311819		282514	461561	75222
Adjusted gross farm income	91651	170906	361234	221218		259681	299919	145323
Cash operating expense	44806	87561	196771	116815		135289	165718	77216
Prepaid expense(-if increased)	327	-1708	-6261	-2892		-1880	-6637	-1200
Accts. payable (+if increased)	0	-5	112	33		-52	661	0
Farm-produced inputs	10	150	1016	410		1541	116	409
Total operating expense	45142	85996	191636	114365		134896	159857	76423
Income before depreciation	46508	84909	169598	106853		124785	140062	68900
Less depreciation	14155	25132	46430	30464		38610	40458	14333
Capital account adjustment	2073	-95	603	436		1931	23	766
Net farm income *	34427	59681	123771	76826		88106	99627	55333
(operator's share) *	(21727)	(19146)	(29145)	(22743)	( )	(30379)	(22918)	(25961)
Labor & mgt. income per operator	-2005	-13039	-25556	-15525		-16674	-19257	8206
Rate earned on investment, %	3.47	4.06	4.66	4.34		4.45	4.13	5.66

Note: Variations in totals are due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.
*Interest expense deducted from operator's share only.

Table 26a. 1988 Average Operating Costs, Investments, and Land Use by Size and Months of Labor for Illinois Beef Cattle Farms

Area of state	Northern Illinois							Southern Illinois
Range in size (total acres)	180-339	340-799	Over 799	All farms	Your farm	Labor 21-27 Mo.	Labor 31-39 Mo.	All farms
Number of farms	14	53	32	99		20	7	22
Selected cost and return items per tillable acre								
Soil fertility	35.71	33.97	34.50	34.35		31.34	38.90	36.57
Pesticides	21.26	18.43	20.51	19.70		17.19	19.99	11.61
Seed and other crop	16.54	15.91	18.59	17.39		18.52	15.22	14.15
Crop total	* 73.51	* 68.30	* 73.60	* 71.44		* 67.05	* 74.11	* 62.33
Auto and utilities	14.17	8.26	7.07	7.92		7.92	9.93	8.37
Machinery repairs, supplies	26.88	22.61	20.93	21.93		26.37	23.24	21.16
Machinery hire	8.07	7.80	7.53	7.67		6.35	7.26	11.80
Fuel and oil	13.16	12.05	12.18	12.18		12.26	13.06	12.20
Machinery depreciation	40.22	35.71	32.65	34.29		33.78	35.98	25.37
Power and equipment total	* 102.50	* 86.43	* 80.36	* 83.99		* 86.67	* 89.48	* 78.91
Drying and storage	3.06	4.27	4.59	4.38		6.13	3.41	1.17
Building repair	12.80	6.90	4.68	6.00		5.75	7.02	5.65
Building depreciation	24.16	19.52	13.82	16.68		20.65	19.41	6.01
Building total	* 40.02	* 30.68	* 23.09	* 27.06		* 32.53	* 29.84	* 12.83
Labor, unpaid	70.66	34.01	19.90	28.29		24.23	36.18	42.16
Labor, hired	4.87	15.28	17.95	16.18		19.00	22.70	14.54
Labor total	* 75.53	* 49.28	* 37.85	* 44.47		* 43.22	* 58.88	* 56.70
Value of feed fed	281.97	245.06	196.40	220.69		178.05	290.71	182.16
Capital purchases	72.32	48.90	32.24	41.12		49.25	17.36	25.60
Operator interest paid	20.77	50.65	35.74	41.04		40.08	40.69	30.57
Crop returns	267.56	259.97	258.17	259.39		265.47	263.21	230.31
Livestock return above feed	137.59	107.96	94.89	102.44		92.58	137.31	82.39
Value of farm production	416.86	375.63	361.57	370.18		366.03	410.61	319.04
Total nonfeed cost	508.13	439.10	404.95	424.24		417.01	472.81	337.02
Management returns	-81.84	-63.68	-42.78	-53.33		-48.26	-62.17	-16.30
Farm investment								
Livestock inventory	107428	199314	329407	228370		236486	298512	116895
Grain inventory	36221	68764	162901	94590		112048	122701	48633
Remaining cost in								
machinery and auto	13066	30254	60655	37650		45573	37695	20206
buildings and fence	24749	46644	72287	51837		79471	62902	11326
soil fertility	0	4	12	6		0	0	94
Value of land (current)	362748	744242	1602078	967574		1120236	1251224	441669
Total farm investment	544213	1089225	2227341	1380028		1593815	1773033	638823
Total investment per acre	2025	2082	1966	2017		2040	1878	1096
Machinery investment per tillable acre	59	66	61	63		64	52	44
Percent tillable land in								
Corn and corn silage	61.7	59.9	58.0	58.9		54.0	61.9	38.0
Soybeans	6.0	12.4	19.9	16.1		22.9	15.1	19.9
Wheat	0.0	0.5	1.4	1.0		1.2	0.2	8.4
Other small grain	1.9	1.4	0.6	1.0		1.1	1.4	0.6
Diverted acres	12.3	16.1	14.3	14.9		14.6	11.3	13.0
All hay and pasture	18.1	8.4	5.3	7.2		6.7	7.8	19.7
Crop yields, bushels per acre								
Corn	72	70	76	73		77	74	90
Soybeans	44	29	31	31		30	33	27
Wheat	0	48	61	58		61	80	59

Note: Variations in totals are due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.
*Figures marked with an asterisk are subtotals.

Table 27. 1988 Average Return, Costs, and Financial Summary by Size, Type, and Soil Rating for Illinois Part-Time Farms That Use Less Than 10 Months of Labor

Area of state	Northern Illinois					Southern Illinois		
Farm type and soil rating	Grain 56-85		Grain 86-100		Livestock	Grain 36-85		Livestock
Range in size (total acres)	Under 260	Over 260	Under 260	Over 260	All farms	Under 260	Over 260	All farms
Number of farms	27	34	46	44	9	29	29	3
Total acres in farm	172	411	179	440	169	174	466	267
Acres of tillable land	161	379	169	416	122	155	416	149
Soil rating on tillable land	75	77	93	91	84	57	61	52
Total months labor	5.4	6.0	5.2	6.7	5.7	5.1	6.8	7.2
Months of hired labor	0.4	0.5	0.6	0.5	0.0	0.1	0.6	0.5
Beef produced, hundredweight	10	14	8	42	58	34	42	178
Pork produced, hundredweight	39	1	1	1	988	24	24	600
Dairy cows, number	0	0	0	0	0	0	0	0
Dollar returns per farm								
Crop returns	34419	84479	43106	109793	32792	30100	86231	22274
Livestock returns above feed	578	391	455	473	11177	558	1337	10554
Custom work	494	1871	287	1667	263	180	687	0
Other farm receipts	601	2797	1179	2234	1363	1119	1389	769
Value of farm production	36092	89538	45027	114167	45595	31956	89644	33597
Dollar costs per farm								
Crop expenses	10434	23436	12697	29756	8487	7636	24556	7562
Power and equipment	9346	19348	11441	23199	11592	8334	21807	14194
Building and fence	2596	4453	3821	8149	3897	1599	2815	3441
Labor	6735	7470	6311	8357	7235	6410	8607	8860
Livestock services & supplies	109	186	101	196	2675	187	185	1291
Taxes	2956	7626	4273	8592	2912	1373	3989	1708
Insurance and miscellaneous	1707	3163	2192	3904	2098	1273	3169	1855
Interest on nonland capital	4577	8255	5437	12053	5685	2743	6868	7081
Land charge or net rent	12533	29607	16280	38667	10717	7762	22792	6680
Total nonfeed cost	50992	103544	62553	132872	55299	37316	94788	52671
Capital account adjustment	623	489	609	-77	0	1060	2425	0
Management returns	-14276	-13517	-16916	-18782	-9702	-4300	-2718	-19073
Farm production per $1.00 of nonfeed costs	0.71	0.86	0.72	0.86	0.82	0.86	0.95	0.64
Farm production per man	79496	179165	104432	203650	95432	74535	157317	56256
Financial summary								
Cash operating income	43722	119151	58074	137898	76734	32747	99523	50375
Inventory change	-2593	-11389	-2983	-4800	5642	1039	-5862	-2978
Accts. receivable (net change)	-1722	-6401	-4428	-6988	-1918	0	-1492	-1779
Farm products used	155	262	25	404	426	216	975	264
Less purchased feed	2306	11855	4879	11304	22624	1724	2980	9489
Less purchased livestock	1161	227	780	1040	12663	322	517	2792
Adjusted gross farm income	36092	89539	45027	114168	45595	31956	89644	33597
Cash operating expense	22671	50097	29376	60934	25635	16369	49041	21828
Prepaid expense(-if increased)	-419	-740	-693	-1501	814	295	-549	-647
Accts. payable (+if increased)	0	37	118	-415	-41	0	17	0
Farm-produced inputs	124	205	6	327	25	165	793	0
Total operating expense	22376	49598	28807	59344	26432	16829	49302	21180
Income before depreciation	13717	39941	16220	54823	19163	15127	40342	12417
Less depreciation	5178	9163	6335	15061	5353	3668	8025	9397
Capital account adjustment	623	489	609	-77	0	1060	2425	0
Net farm income *	9162	31267	10494	39685	13810	12519	34742	3020
(operator's share) *	(2157)	(8835)	(3073)	(7903)	(4280)	(7348)	(7248)	(-7137)
Labor & mgt. income per operator	-8248	-6631	-11250	-11063	-3008	1755	4910	-10740
Rate earned on investment, %	0.96	3.63	1.27	3.59	2.53	3.44	5.22	-2.65

Note: Variations in totals are due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.
*Interest expense deducted from operator's share only.

Table 27a. 1988 Average Operating Costs, Investments, and Land Use by Size, Type, and Soil Rating for Illinois Part-Time Farms That Use Less Than 10 Months of Labor

Area of state	Northern Illinois					Southern Illinois		
Farm type and soil rating	Grain 56-85		Grain 86-100		Livestock	Grain 36-85		Livestock
Range in size (total acres)	Under 260	Over 260	Under 260	Over 260	All farms	Under 260	Over 260	All farms
Number of farms	27	34	46	44	9	29	29	3
Selected cost and return items per tillable acre								
Soil fertility	28.56	26.90	37.57	36.70	34.30	25.14	29.81	25.22
Pesticides	20.55	20.14	20.08	20.15	18.20	12.65	14.96	7.97
Seed and other crop	15.61	14.75	17.41	14.74	17.32	11.42	14.32	17.56
* Crop total	64.72	61.79	75.05	71.59	69.82	49.21	59.09	50.75
Auto and utilities	6.53	4.35	8.18	4.50	19.58	8.37	4.30	16.45
Machinery repairs, supplies	15.19	14.22	13.15	11.50	20.24	14.68	16.63	18.48
Machinery hire	5.91	7.26	16.22	7.95	18.57	5.45	6.84	2.75
Fuel and oil	7.90	7.40	7.15	6.69	13.79	8.85	8.93	15.76
Machinery depreciation	22.43	17.78	22.92	25.18	23.18	16.36	15.77	41.82
* Power and equipment total	57.97	51.01	67.63	55.82	95.36	53.71	52.47	95.26
Drying and storage	2.79	3.85	4.62	5.88	2.60	1.21	1.33	0.00
Building repair	3.63	1.52	3.44	2.74	8.60	1.82	1.90	1.85
Building depreciation	9.68	6.38	14.53	10.98	20.86	7.28	3.54	21.24
* Building total	16.10	11.74	22.59	19.61	32.06	10.30	6.77	23.09
Labor, unpaid	39.25	18.25	33.65	18.64	58.50	40.69	18.77	55.93
Labor, hired	2.52	1.44	3.65	1.47	1.02	0.61	1.94	3.54
* Labor total	41.78	19.70	37.30	20.11	59.52	41.31	20.71	59.47
Value of feed fed	8.24	2.73	2.35	4.50	260.87	14.91	6.49	164.56
Capital purchases	25.36	36.30	26.31	38.00	45.94	21.48	16.65	39.84
Operator interest paid	10.92	14.54	15.61	23.10	52.05	18.11	26.95	56.24
Crop returns	213.49	222.75	254.80	264.16	269.77	193.97	207.49	149.49
Livestock return above feed	3.59	1.03	2.69	1.14	91.95	3.59	3.22	70.83
Value of farm production	223.87	236.08	266.16	274.68	375.10	205.94	215.70	225.49
Total nonfeed cost	316.29	273.01	369.75	319.68	454.92	240.48	228.08	353.50
Management returns	-88.55	-35.64	-100.00	-45.19	-79.83	-27.72	-6.54	-128.01
Farm investment								
Livestock inventory	2251	1328	1304	5562	21865	4421	5731	33444
Grain inventory	22148	49967	29175	66178	14191	12969	38971	13745
Remaining cost in								
machinery and auto	5526	12453	7427	18216	5271	3761	10954	6255
buildings and fence	14775	15086	15034	27425	9029	3892	4596	13242
soil fertility	0	0	0	17	0	0	0	0
Value of land (current)	250667	592143	325606	773345	214342	155239	455839	133593
Total farm investment	295367	670976	378545	890743	264698	180282	516092	200279
Total investment per acre	1718	1634	2120	2024	1569	1033	1106	751
Machinery investment per tillable acre	34	33	44	44	43	24	26	42
Percent tillable land in								
Corn and corn silage	47.9	43.4	47.6	42.1	50.2	25.8	32.6	40.7
Soybeans	35.7	38.8	35.9	39.9	28.2	30.1	33.2	15.4
Wheat	0.6	1.0	0.8	0.5	0.0	15.8	16.8	2.0
Other small grain	0.8	0.5	0.7	0.2	4.0	0.0	0.0	0.0
Diverted acres	13.1	14.3	13.8	13.5	13.2	17.3	12.5	20.1
All hay and pasture	1.6	1.1	0.7	1.1	4.4	5.3	3.8	21.7
Crop yields, bushels per acre								
Corn	65	67	84	86	83	86	74	68
Soybeans	23	25	29	28	36	24	25	23
Wheat	42	47	68	78	0	50	56	50

Note: Variations in totals are due to rounding to the nearest dollar. Northern Illinois includes both northern and central Illinois.
*Figures marked with an asterisk are subtotals.

NOTES

ASSOCIATIONS, FIELD STAFF, AND COOPERATORS ENROLLED

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Kristian S. Lauritzen
Lee K. Freedlund
Benjamin A. Greiner
Alan Petersohn
Jeffrey L. Johnson
Rodney B. Gieseke

WESTERN
676

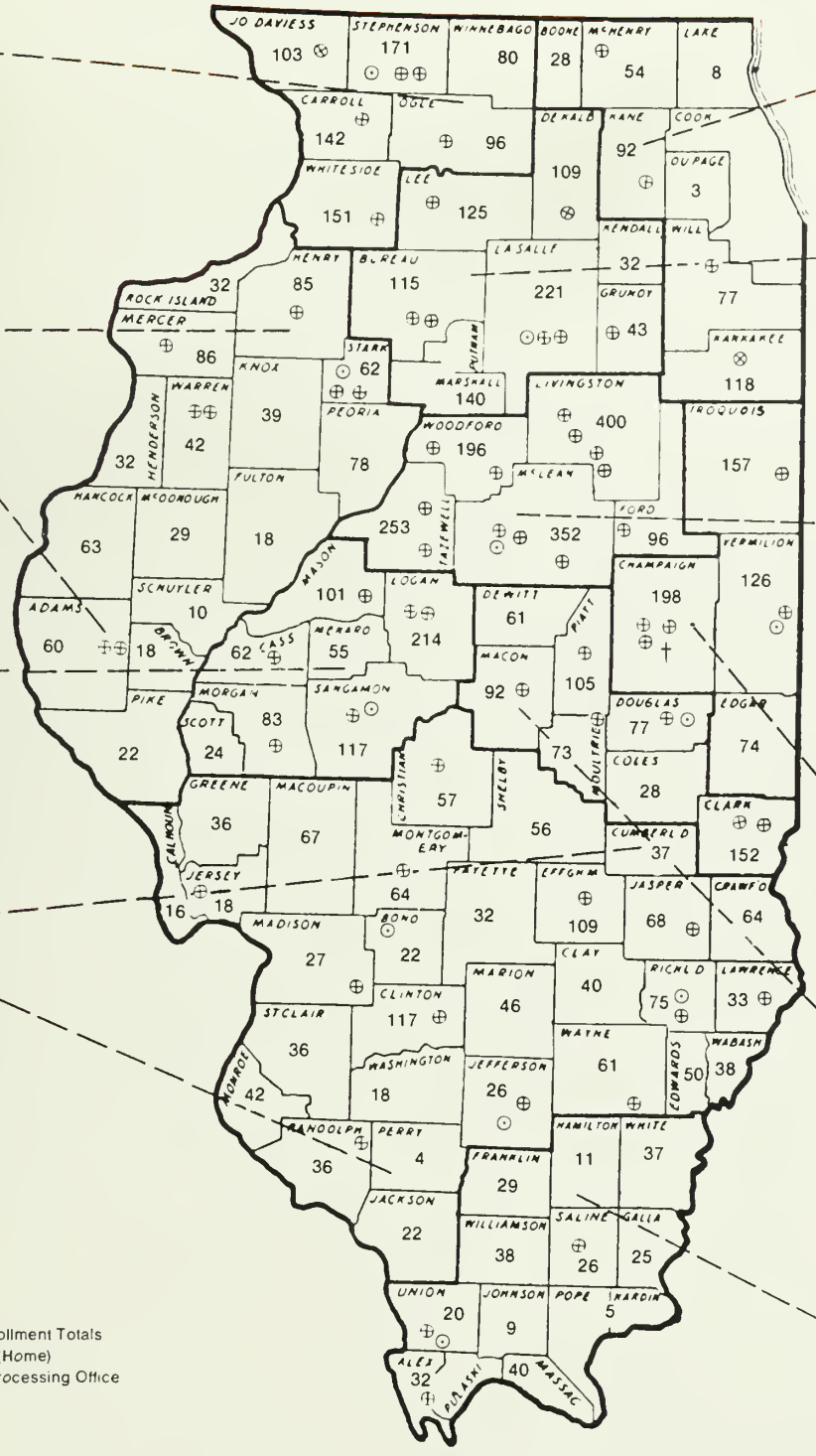
Gary Goodwin
Thomas H. Jennings
Roy L. Ewalt
Mike R. Shepherd
Timothy D. Phelps
Roberta Boarman
Robert Rhea
David A. Ward

SANGAMON VALLEY
656

Dorrence B. Brucker
George W. Shafer
James E. Phelan
Aaron Liesman
Kevin E. Coultas
Gary Shupe

LINCOLN
1,317

Arnold A. Galloway
Robert E. Rogers
Michael E. Schmitz
Thomas J. Nolte
John E. White
Dennis J. Graden
Louis J. Aldag
Donald L. Hampton
Bradley E. Yockey
Dathel Davidson
Daniel A. Doan
Eddie G. Sterchi



Associations and Field Staff

NORTHEASTERN
380

Donald R. Muehling
David J. O'Brien
Gordon Wakey
Michael G. Bossert

ILLINOIS VALLEY
785

Danny L. Stetson
Stephen R. Kingry
Harold L. Winship
John A. Hudson
Dale J. Heinkel
Bradley G. Lenschow
James P. McCabe

PIONEER
1,297

L. David Schroll
Jerry Crump
Maurice E. Sprout
Dana Scheidecker
Gary Bressner
Kent Meister
David A. Pilgrim
Thomas R. Hand
John F. Kennedy
Bradley E. Vissering
Les A. Marti
Darren L. Bray

EASTERN
555

Robert K. Boesdorfer
Harry E. White
Howard Peverly
Bruce E. Burk
Dwight D. Raab

EAST CENTRAL
588

Rolland D. Gustafson
James E. Cullison
Christopher Hausman
Gary E. Connelly
Penny N. Grenter
Jeffrey D. Lewis

SHAWNEE
272

Robert D. Kiesecoms
Douglas E. Hileman
Mark A. Taake

* Numbers are Enrollment Totals
69 ⊕ Field Staff Office (Home)
11 ⊙ District Record Processing Office
† State Office

OFFICIAL ENROLLMENT
June 1, 1989

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of the Department of Agricultural Economics

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